

# Rock & Gem

JANUARY 2015 | VOL. 45 ISSUE 1

THE EARTH'S TREASURES • MINERALS AND JEWELRY

## 10 HOT SPOTS FOR GOLD

**SAVE THE  
RICE MUSEUM!**  
An Institution  
in Trouble

**NEW COLUMN!**  
Bench Tips

**R&G KIDS:**  
Go On a  
Dino Dig

**ECO-FRIENDLY JEWELER:**  
Conserve Resources and Cash

[www.rockngem.com](http://www.rockngem.com)

Vol 45 No. 1 • Issue code: 2015-01 January 2015  
Display until 2/10/2015

\$4.99



PRINTED IN USA



# Faceting For The Brightest and The Best!



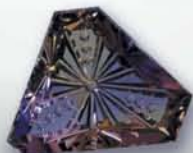
## FANTASY MACHINE

- Shown here with V2 Classic Mast
- Concave and Fantasy Cuts
- Unlimited potential for the creative faceter
- Can be used with other brands of mast



## V5 CLASSIC FACETING MACHINE

- Assured precision and repeatability
- Upgraded design for increased stability
- Higher speed positioning
- Upgrades available for older V2 units



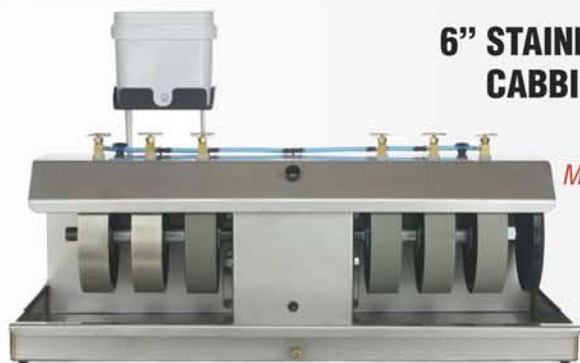
[www.ultratec-facet.com](http://www.ultratec-facet.com)  
Phone: +1.714.542.0608  
[info@ultratec-facet.com](mailto:info@ultratec-facet.com)



Ultra Tec  
1025 E. Chestnut Ave.  
Santa Ana, CA 92701



## 6" STAINLESS STEEL CABBING UNIT



*\*Free ground shipping on  
Machines only - Continental 48 states.*

Item #1-0674  
List price \$1,550.00

**Sale \$1,195.00**

## 6" STAINLESS STEEL ALL DIAMOND GRINDING / POLISHING MACHINE



*\*Free ground shipping on  
Machines only - Continental 48 states.*

Item #1-0757  
List price \$1,220.00

**Sale \$995.00**

## 6" PAINTED-POWDER COAT ALL DIAMOND GRINDING / POLISHING MACHINE



*\*Free ground shipping on  
Machines only - Continental 48 states.*

Item #1-0756  
List price \$1,095.00

**Sale \$895.00**

All diamond grinding and polishing machine, made by Kingsley North available in Stainless Steel or Painted-Powder Coat. Heavy duty construction, 3/4" stainless steel shaft, has a belt guard and motor mount that you attach to rear of unit.

- 1/3 HP, 1725 RPM thermal protected ball bearing motor
- Shaft ends are taped to accept a 1/4-20 screw on disc
- Unit have the following:
  - ~ Two 6" x 1 1/2" metal bonded diamond grinding wheels, 80 and 220 grit
  - ~ Four 6" x 1 1/2" resin diamond bonded wheels, 280, 600, 1200 and 3000 grits
  - ~ A 5-1/2" 1/4-20 right hand canvas polishing disc
  - ~ 14,000 diamond compound
  - ~ One year warranty on motor and machine

### KINGSLEY NORTH DIAMOND GRINDING WHEELS 6" x 1-1/2"



Metal bonded diamond grinding wheels, with plastic center core. Made with commercial grade diamonds for longer grinding life, clean and faster cutting. All wheels have a 1" diameter and include bushing to accommodate 3/4", 5/8" and 1/2" arbors. Individually boxed. Shipping weight 6" 3 lbs.

Stock No.	Mesh/Grit	List	SALE
1-1021	80	\$135.00	<b>\$86.00</b>
1-1024	220	117.00	<b>86.00</b>

### KINGSLEY NORTH DIAMOND BELT WHEELS 6" x 1-1/2"



A resin-bonded diamond belt that is mounted on a 3/8" of soft sponge rubber on a hard plastic hub wheel. All wheels have a 1" bore and are supplied with a reducing bushing for all size shafts, 3/4", 5/8" or 1/2". Shipping weight 1 lb. *\*May mix & match for Discount.*

Stock No.	Mesh/Grit	List	SALE	+4 SALE*
3-0300	280	\$75.00	<b>\$63.75</b>	<b>\$51.00</b>
3-0301	600	75.00	<b>63.75</b>	<b>51.00</b>
3-0302	1,200	75.00	<b>63.75</b>	<b>51.00</b>
3-0303	3,000	75.00	<b>63.75</b>	<b>51.00</b>

**NEW!**

### REZ DIAMOND BELT WHEELS 6" x 1-1/2"



They are an excellent choice when it comes to high volume commercial cabbng. Premium diamond is locked into a specially formulated resin binder belt that offers greater longevity. This resin belt is attached to a medium density foam backing. These wheels require a break-in period and have 1" arbor bushings. Shipping weight 1 lb.

Stock No.	Mesh/Grit	SALE
3-0331	280	<b>\$85.00</b>
3-0332	600	<b>85.00</b>
3-0333	1200	<b>85.00</b>
3-0334	3000	<b>85.00</b>
3-0335	Set of 4	<b>289.00</b>



Find us on  
Facebook



PayPal



# Kingsley North, Inc.

P.O. Box 216: Dept 3  
910 Brown Street  
Norway, MI 49870-0216



Phone: 800-338-9280  
Web site: [www.kingsleynorth.com](http://www.kingsleynorth.com)  
Email: [sales@kingsleynorth.com](mailto:sales@kingsleynorth.com)  
Fax: 906-563-7143

FREE Catalogs





# Rock & Gem

Volume 45, Number 1

January 2015

## ON THE COVER

Fee-panning sites offer easy entrée into the hobby of recreational gold prospecting for beginners, while more practiced gold hunters can pan, sluice, and gold detect on public lands across the nation. (Lynn Varon photo)

## FEATURES

### 10 Places to Find Gold..... 12

Free and fee sites that are open to the public  
by Lynn Varon

### Save the Rice! (Museum, That Is) ..... 16

This privately owned mineral museum needs your financial support  
by Bob Jones

### The North Star Mining Museum ..... 24

Gold mining history in Grass Valley, California  
by Marc Davis

ECO-FRIENDLY JEWELER

### Reduce Environmental Impact..... 34

Green bench practices benefit the budget  
by Christine Dhein

### Rock & Gem Kids..... 38

Go on a dinosaur dig!



### The Fluorescent Mineral Society ..... 46

Uniting and educating collectors since 1971  
by Conrad North, Albert Liebetrau and Jim Horste

### 2014 Editorial Index ..... 71

## REGULAR COLUMNS

Field Notes.....	6	Bench Tips.....	22
Lapidary		What to Cut .....	44
of the Month.....	8	Picks & Pans.....	68
Show Dates.....	10	On the Rocks.....	72
Rock Science.....	14	Parting Shot.....	74

16



24



46



**SUBSCRIPTION QUESTIONS? Call (866) 287-9383**

## Printed in U.S.A.

Notice: On rare occasions, typographical errors occur in prices listed in magazine advertisements. For this reason, advertisements appearing in *Rock & Gem* should be considered as requests to inquire, rather than as unconditional offers to sell. All prices are subject to change without notice.

**Beckett**  
MEDIA

*Rock & Gem* (ISSN 0048-8453, USPS 486-290) is published monthly by Beckett Media LLC, 4635 McEwen Rd., Dallas, TX 75244. Periodicals postage paid at Dallas, TX 75260 and at other mailing offices. Printed in U.S.A. Copyright 2015 by Beckett Media, LLC  
**POSTMASTER:** Send address changes to Rock & Gem, c/o Beckett Media, 4635 McEwen Rd., Dallas, TX 75244.  
© 2015 by Beckett Media, LLC, or [subscriptions@beckett.com](mailto:subscriptions@beckett.com).  
All rights reserved. Reproduction of any material from this issue in whole or in part is strictly prohibited.  
Single-copy price \$4.99. Subscription in U.S.A. and possessions: 1 year (12 issues) for \$27.95; 2 years for \$49.95; 3 years for \$66.95. Add \$15.00 per year postage for Canada and all other foreign countries.  
**EDITORIAL CONTACT INFORMATION:** [rockngem.com](http://rockngem.com)



*The finest minerals and fossils in sunny* **TUCSON!**

# **ARIZONA MINERAL & FOSSIL SHOW™**

**JAN. 31 - FEB. 14, 2015**



*Spanish Fluorite ~ Photo by Jeff Scovil©*

## **400 Top Quality Dealers in 3 Unique Locations**

### **★InnSuites/Hotel Tucson City Center**

*475 N. Granada Ave., at St. Marys*

**Over 300 dealers in one stop!**

### **★Ramada Ltd. - Downtown**

*665 N. Freeway, at St. Marys (west of I-10 at St Marys)*

### **★Mineral & Fossil Marketplace**

*1333 N. Oracle, at Drachman*

**FREE Admission ★ FREE Parking ★ FREE Shuttle to all 3 locations**

**Wholesale ★ Retail ★ Show Hours: 10 - 6 daily**

Martin Zinn Expositions, L.L.C., P.O. Box 665, Bernalillo, NM 87004, Fax: (303) 223-3478, [mzexpos@gmail.com](mailto:mzexpos@gmail.com), [www.mzexpos.com](http://www.mzexpos.com)



Like us on facebook ~ [facebook.com/mzexpos](https://facebook.com/mzexpos)



## The Day I Moved A Rock Old Gold versus New Gold

While on a mountain-side one day,  
I moved a rock out of the way,  
And found something the rock did hide  
That was within the mountain-side.

Beneath the rock there was a hole  
I probed it with a tree-branch pole,  
Which plunged in easily that day  
With no resistance all the way.

A cave or cavern came to mind,  
Or crystal pocket, as a find.  
I moved some rocks using that pole,  
Enlarging the size of the hole.

I peered inside and caught a hint  
Of crystals there from a bright glint  
I lit a match to help me see,  
And crystals there looked back at me.

Among the crystals was some gold.  
A mother-lode I did behold.  
With luck I'd found a great treasure.  
That filled me up with much pleasure,  
Great wealth I'd found in full measure.  
Gold with allure that does endure.  
New gold is water, wheat, and oil.  
And data gotten without toil.

Computers they mine not from soil  
But from excess data's turmoil.  
The old way that there is to mine  
Is harder, but it suites me fine.

Computer jobs I must decline  
For I like better the sunshine,  
And time to think about that day,  
The day I moved a rock away.

—Ronald J. Yadusky, BS, MD, FACS



WWW.MINDATORG

### EDITORIAL

**BOB JONES**

Senior Consulting Editor

**LYNN VARON**

Managing Editor

**JIM BRACE-THOMPSON**

**MARC DAVIS**

**SCOTT EMPEY**

**BOB RUSH**

**HELEN SERRAS-HERMAN**

**STEVE VOYNICK**

Regular Contributors

### ART

**MARY ROBERTSON**

Art Director

### ADVERTISING

**BILL DUMAS**

Advertising Director,  
Beckett Media

**TOM CARROLL**

*Rock & Gem*

Ad Traffic Coordinator

**BRIAN ROBERTS**

*Rock & Gem*

Advertising Director

### EDITORIAL SUBMISSIONS:

Lynn Varon / *Rock & Gem*  
5235 Mission Oaks Blvd. #201  
Camarillo, CA 93012  
(972) 448-4626  
e-mail: editor@rockngem.com

### ADVERTISING INQUIRIES:

Brian Roberts / *Rock & Gem*  
18271 W. Desert Trumpet Rd.,  
Goodyear, AZ 85338  
(623) 327-3525 phone  
(623) 327-2188 fax  
e-mail: broberts@rockngem.com

**SANDEEP DUA**

President

**KEVIN ISAACSON**

Vice President  
Marketing and Sales

**JAMES L. MILLER**

Founder





[www.firemountaingems.com](http://www.firemountaingems.com)

One Fire Mountain Way, DEPT C012 Grants Pass, OR  
97526-2373 1-800-355-2137

Email-Only Offers  
[www.firemountaingems.com](http://www.firemountaingems.com)  
Sign Up Today

## America's Favorite Beading and Jewelry Supply Company®

Request your **Free** 392 page catalog or go online  
to see over 120,000 hot jewelry-making products

You supply the creativity,  
we supply everything else!®

Kathy Anderson, CO  
[www.etsy.com/shop/GldnRamMtlsmithing](http://www.etsy.com/shop/GldnRamMtlsmithing)  
Finalist, Metals Jewelry-Making  
Contest

Fire Mountain Gems  
and Beads© 2015



# LAPIDARY OF THE MONTH



After creating a few hundred cabochons, I was thinking about how to use the finished pieces in a different way. Looking for ideas on the Internet, I stumbled upon United States stamps with pictures of minerals, which I found very interesting.

"I found some stamps that were issued on Sept. 17, 1992. This group of four included azurite, copper, variscite and wulfenite. I started to design my first creation using the first-day issue envelope with the variscite stamp paired with a cabochon of this wonderful green material from Utah.

"After outlining a trillion shape, I trimmed the slab on my 10-inch Highland Park saw, staying about 2 mm away from the outline. I like to bring the actual shape into focus with the 100 grit metal bond diamond wheel of my Graves six-wheel Caberet. Once I get the actual shape, I start to grind off the corners, creating a bevel toward the domed look I like to end up with.

"After roughing this into the general shape, I move to the second wheel on my Caberet, which is a metal bond 360 grit diamond wheel. I repeat the entire process, taking out all the gouges created by the rough 100 grit diamond wheel. This step also allows me to better define the domed shape. Now I move to the Nova Resin 280 grit wheel, again touching every area of the cabochon.

"Next, I move to the other side of the Caberet, where a 600 grit Nova Resin wheel is located, and start this sanding process, again making sure that I cover every inch of the cabochon, in-

cluding the back. Once this is done, I stop and carefully review the cab with my Opti-Visor magnifier, looking for any scratches I have not sanded out. If no issues are noted, I move on to the 1200 Nova Resin wheel, known as the pre-polish wheel. Just as in each previous step, I make sure that I touch every inch of the surface. With the 14000 grit Nova Resin wheel, I make sure that the cab is ready for my final polish step.

"I find that most materials respond very well to my leather polish pad and a product known as 'Holy Cow'. While there are mixed reviews on this polish, I get great results with water mixed with the Holy Cow and sprayed onto the wheel. I hold the cab against the leather until it drags and tries to slow down the wheel. You need to be careful at this stage of the process because the leather wants to grab the cab and send it flying off the pad.

"My thought was to create a framed piece combining both the first day cover stamp issued envelope and the variscite cabochon. I searched craft stores for a nice shadow box-type frame and found a 6-inch-tall, 14-inch-wide, 1½-inch-deep frame, which I thought was perfect—and it was on sale!

"To create a quality presentation piece, I used matting to highlight the envelope with the stamp, as well as the actual 37 mm by 29 mm by 8 mm variscite cabochon."

—Richard Alexis  
Hollywood, FL



## Would you like to be named Lapidary of the Month?

To enter the contest:

- Write a 500-word step-by-step description of how you crafted your lapidary project from start to finish. Save it as a document file.
- Take at least one sharp, close-up, color digital photo of the finished project. Photos must be high-resolution (300 dpi at 4 inches by 5 inches, minimum).
- Attach your document file and digital photo (.tif or .jpg) to an e-mail and send it to [editor@rockngem.com](mailto:editor@rockngem.com) with the subject line "Lapidary of the Month".
- Make sure you include your name and street address (not a PO Box)



for prize delivery should your entry be selected for publication. Only winners will be notified. E-mail the editor or call (972) 448-4626 with any questions about these requirements.

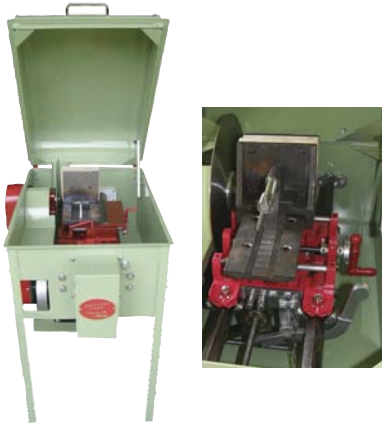
Lapidary of the Month winners receive a two-speed Dremel Model 200 N/40 MultiPro kit and a wall plaque in recognition of their creativity and craftsmanship. Winning projects are also posted on our Web site, [www.rockngem.com](http://www.rockngem.com).



# HIGHLAND PARK LAPIDARY COMPANY

Quality Equipment at a Fair Price

Slab Saws (10 to 36 inch)



Diamond Blades



High Speed Sphere  
Machines & Tooling



Shaping  
Machines



Drop Saws



Bullwheel Grinders  
& Polishers



Parts & Accessories



Oil Cleaners  
(Mounted & Free Standing)



Production Cutting Tools

- Ultrasonic Drills
- Grinding Wheels
- Silicon Carbide Grit
- Cerium Oxide Polish
- Diamond Flat Laps
- Flat Lap & Beveling Machines

*and more...*

**JANUARY 21 - 25, 2015**  
**Quartzsite Pow Wow Show**  
**Space 214-215**  
**Quartzsite AZ**

**JANUARY 29 - FEBRUARY 15, 2015**

**Kino Gem and Mineral Show**  
*(formerly T.E.P Gem and Mineral Show)*

**Tent 14**  
**Tucson AZ**

Call to receive a Free 50+ page color catalog or visit  
the website to see our full line of lapidary equipment  
and supplies.

**HIGHLAND PARK LAPIDARY COMPANY**

**www.HPLapidary.com (512) 348-8528**







"Business to Business"  
Gem, Jewelry &  
Lapidary Trade Shows

# 2015

Asheville, NC.....January 6-7  
Orlando, FL.....January 9-10-11  
Tucson, AZ.....Jan. 31-Feb. 13

**Tucson**  
GEM MALL

January 31 - February 13

**HOLIDOME®**  
New Dates & Location  
January 31 - February 8

Minneapolis, MN.....April 12-13  
Livonia (Detroit), MI....April 17-18-19  
West Springfield, MA.....April 24-25  
Orlando, FL.....May 1-2-3  
Franklin, NC.....May 8-9-10  
Livonia (Detroit), MI.....July 10-11-12  
Franklin, NC.....July 23-24-25-26  
Spruce Pine, NC.....July 30-31-Aug. 1-2  
Tucson, AZ....September 10-11-12-13  
Minneapolis, MN....September 27-28  
Livonia (Detroit), MI.....October 2-3-4  
West Springfield, MA.....Oct. 9-10  
Asheville, NC.....October 20-21  
Orlando, FL.....October 23-24-25

Dates Subject to Change

**Wholesale Only**  
**Registration & Proof**  
**of Business Required**

Gem & Lapidary Wholesalers, Inc.  
859 Petrified Forest Rd.  
P.O. Box 98 Flora, MS 39071  
Phone 601.879.8832 | Fax 601.879.3282  
E-mail info@glwshows.com  
Website glwshows.com

# SHOW DATES

Mark Your Calendar!

Submit show date information at least four months in advance using the electronic form at [www.rockngem.com](http://www.rockngem.com).

## January 2015

**2-4—SANTA ROSA, CALIFORNIA:** Wholesale and retail show; Gem Faire Inc; Sonoma County Fairgrounds; 1350 Bennett Valley Rd; Fri. 12-6, Sat. 10-6, Sun. 10-5; Admission \$7, Children free (ages 0-11); Fine jewelry, precious & semi-precious gemstones, millions of beads, crystals, gold & silver, pearls, minerals & much more at manufacturer's prices. Exhibitors from around the world. Jewelry repair & cleaning while you shop. Free hourly door prizes.; contact Yooy Nelson, (503) 252-8300; e-mail: [info@gemfaire.com](mailto:info@gemfaire.com); Web site: HYPERLINK "<http://www.gemfaire.com>"

**9-11—HILLSBORO, OREGON:** Wholesale and retail show; Gem Faire Inc, Washington County Fairgrounds, 873 NE 34th Ave; Fri. Noon-6pm, Sat. 10am-6pm, Sun. 10am-5pm; Admission \$7, Children free (ages 0-11); Fine jewelry, precious & semi-precious gemstones, millions of beads, crystals, gold & silver, pearls, minerals & much more at manufacturer's prices. Exhibitors from around the world. Jewelry repair & cleaning while you shop. Free hourly door prizes.; contact: Yooy Nelson, (503) 252-8300; e-mail: [info@gemfaire.com](mailto:info@gemfaire.com); Web site: HYPERLINK "<http://www.gemfaire.com>"

**9-11—MESA, ARIZONA:** Annual show; Flagg Mineral Foundation, Mesa Community College, 1833 W Southern Avenue; Daily 9:00am-5:00pm; Free; 43rd Annual Flagg Gem and Mineral Show. Jan 9-11 at Mesa Community College southwest parking lot. Corner of Dobson Road and US 60. Free admission and parking. Over 100 vendors, club booths and displays. The largest show in the Phoenix area. Free activities for kids. Peralta Stones display.; contact: Dana Slaughter, 2952 E Silverbell Road, San Tan Valley, AZ, 85143, (602) 312-9791; e-mail: [dsminerals@aol.com](mailto:dsminerals@aol.com); Web site: [flaggshow.info](http://flaggshow.info)

**16-18—DEL MAR, CALIFORNIA:** Wholesale and retail show; Gem Faire Inc, Del Mar Fairgrounds, 2260 Jimmy Durante Blvd; Fri. Noon-6pm, Sat. 10am-6pm, Sun. 10am-5pm; \$7, free (ages 0-11); Fine jewelry, precious & semi-precious gemstones, millions of beads, crystals, gold & silver, pearls, minerals & much more at manufacturer's prices. Exhibitors from around the world. Jewelry repair & cleaning while you shop. Free hourly door prizes.; contact: Yooy Nelson, (503) 252-8300; e-mail: [info@gemfaire.com](mailto:info@gemfaire.com); Web site: HYPERLINK "<http://www.gemfaire.com>"

**23-25—SAN RAFAEL, CALIFORNIA:** Wholesale and retail show; Gem Faire Inc, Marin Center, 10 Avenue of the Flags; Fri. Noon-6pm, Sat. 10am-6pm, Sun. 10am-5pm; Admission \$7, Children free (ages 1-11); Fine jewelry, precious & semi-precious gemstones, millions of beads, crystals, gold & silver, pearls, minerals & much more at manufacturer's prices. Exhibitors from around the world. Jewelry repair & cleaning while you shop. Free hourly door prizes. Contact: Yooy Nelson, (503) 252-8300; e-mail: [info@gemfaire.com](mailto:info@gemfaire.com); Web site: HYPERLINK "<http://www.gemfaire.com>"

**JAN. 29—FEB. 15—TUCSON, ARIZONA:** Annual show; Eons Expos, LLLP, 22nd Street Show Tent, 600 W 22nd Street; Daily 9-6; Admission Free, Children Free; An 18-day show inside a huge 60,000 square foot climate controlled tent. Free parking. 200 booths. A Top Five show in Tucson based on table count. Wholesale and retail. We curate an even mix of fossil, mineral, gemstone, and jewelry dealers. Contact: Lowell Carhart, 80 Roslyn Forest Lane, Charlottesville, VA, 22901, (804) 291-6357; e-mail: [LowellCarhart@yahoo.com](mailto:LowellCarhart@yahoo.com); Web site: HYPERLINK "<http://www.22ndStreetShow.com>"

**JAN. 30-FEB. 01—MONTEREY, CALIFORNIA:** Wholesale and retail show; Gem Faire Inc, Monterey County Fairgrounds, 2004 Fairground Rd; Fri. Noon-6pm, Sat. 10am-6pm, Sun. 10am-5pm; Admission Free, Children Free; Fine jewelry, precious & semi-precious gemstones, millions of beads, crystals, gold & silver, pearls, minerals & much more at manufacturer's prices. Exhibitors from around the world. Jewelry repair & cleaning while you shop. Free hourly door prizes.; contact: Yooy Nelson, (503) 252-8300; e-mail: [info@gemfaire.com](mailto:info@gemfaire.com); Web site: HYPERLINK "<http://www.gemfaire.com>"

**JAN. 31-FEB. 14—TUCSON, ARIZONA:** Wholesale and retail show; Martin Zinn Expositions, Hotel Tucson City Center/InnSuites, 475 N. Granada Ave; Daily 10:00 am-6:00 pm; Admission Free; Gallery of Artists, Fossil Hall, Dinosaur replicas in the courtyard. Over 300 vendors in one location.; contact: Regina Aumente, PO Box 665, Bernalillo, NM, 87004, (505) 867-0425; e-mail: [mzexpos@gmail.com](mailto:mzexpos@gmail.com); Web site: [www.mzexpos.com](http://www.mzexpos.com)

**JAN. 31-FEB. 14—TUCSON, ARIZONA:** Wholesale and retail show; Martin Zinn Expositions, LLC, Ramada Ltd, 665 N Freeway; Daily 10 am-6 pm; Admission Free; Final Saturday show closes at 5 pm.; contact: Regina Aumente, PO Box 665, Bernalillo, NM, 87004, (505) 867-0425; e-mail: [mzexpos@gmail.com](mailto:mzexpos@gmail.com); Web site: [www.mzexpos.com](http://www.mzexpos.com)

**JAN. 31-FEB. 14—Tucson, Arizona:** Wholesale and retail show; Martin Zinn Expositions, LLC, Mineral & Fossil Marketplace, 1333 N Oracle; Daily 10 am-6 pm; Admission Free; Show closes at 5 pm on final Saturday; contact: Regina Aumente, PO Box 665, Bernalillo, NM, 87004, (505) 867-0425; e-mail: [mzexpos@gmail.com](mailto:mzexpos@gmail.com); Web site: [www.mzexpos.com](http://www.mzexpos.com)

**17-18—YACHATS, OREGON:** Annual show; Yachats Agate Festival, Yachats Commons, Hwy 101 and W. 4th St.; Sat. 10:00 am-4:00 pm, Sun. 10:00 am-4:00 pm; Admission Free; January 17 and 18, 2015. Rocks, minerals, crystals and gems in raw and finished forms. Vendors from throughout Oregon, Washington, and Northern California. Speakers and demonstrations. January is the very best time for agate hunting on the beautiful Central Oregon Coast.; contact: Donna Hirschman, P.O. Box 550, Yachats, OR, 97498, (541) 270-3777; e-mail: [iamhirsch@yahoo.com](mailto:iamhirsch@yahoo.com); Web site: [Yachatsagatefestival.com](http://Yachatsagatefestival.com)

continued on page 32



*A.S. Shows Presents*

## **Kino Gem and Mineral Show**

**(Formerly TEP Gem Show)**



**Featuring the Following Vendors:**

Village Originals  
Blake Brothers  
Diamond Pacific Tools  
Driftstone Pueblo  
Enter The Earth  
Gem Center USA  
Norcross Madagascar  
Peru Minerals  
Rachid & Aziz  
Rock Our World  
Silver Rainbird  
Sunwest Silver  
Tex Mex Imports  
The Strong Rock  
White Rhino Silver

**AND MANY MORE!**

**January 31st, 2015 – February 15th, 2015**

- Wholesale / Retail
- Lots of **FREE** Parking
- **FREE** Shuttle Service to and from other shows

## **2014 Denver Expo Gem and Mineral Show**

**September 6th – 13th, 2014**

**At The National Western Complex  
4655 Humboldt Street – Denver, CO 80216  
(Next door to the Denver Coliseum)**

**Featuring the Following Vendors:**

Village Originals, Inc  
Norcross Madagascar  
Silver Rainbird  
MP Products

Rosman Co.  
Rock Our World  
Peru Minerals  
Mineralia

**For information regarding participating in an A.S. Shows event, please email Jim at [Jim@AS-Shows.com](mailto:Jim@AS-Shows.com)**

**[www.AS-Shows.com](http://www.AS-Shows.com)**



# 10

Free and Fee Sites  
That Are Open  
to the Public

Story by Lynn Varon

# Places to Find GOLD

**W**hile the rushes have slowed to trickles, there is still a lot of gold to be found in them there hills, streams, crevices, and buckets of concentrates. Old mines and private claims are now home to organized operations that give the amateur an enjoyable introduction to recreational gold seeking.

Gold panning is an exciting activity that can be enjoyed by anyone. A number of locations offer experiences that are suitable for families or for the adventurous individual. That yellow glint—however small—in the bottom of your pan will leave you feeling like you’ve struck it rich. Use a sluice to move more material and up the amount of gold you recover.

If you prefer to keep your feet dry, metal detectors that are specially calibrated to indicate the density of buried material make it possible to find nuggets and other, larger pieces of gold.

Getting started is easy with hands-on help from seasoned pros. Most fee-panning sites provide or rent equipment, so the initial investment is minimal. Before long, you may be ready to strike out on your own and try your pan at recovering gold from streams on public lands.

The following are only a few of the numerous free and fee sites across the United States that provide gold-recovery opportunities for beginning and seasoned prospectors. Follow the links for directions, fees, regulations, and trip-planning details.



LYNN VARON PHOTO



## 1. ALABAMA

At Alabama Gold Camp, in Lineville, a nominal admission fee includes panning, sluicing, and metal detecting. Children 11 and under are free with an adult. Camping ("primitive" or "luxury" levels) is also available there. Bonus finds may include garnet and citrine crystals, fossils and artifacts. ([alabamagoldcamp.com](http://alabamagoldcamp.com))

## 2. ALASKA

The Crow Creek Gold Mine is a family-owned fee site situated on what used to be a large hydraulic placer gold mine. Located near Girdwood, among the Chugach Mountains, the mine allows access to claims on Crow Creek that are still producing gold. The fee includes instruction and equipment for beginners. Metal detecting, dredging and sluicing are also allowed. ([www.crowcreekmine.com](http://www.crowcreekmine.com))

## 3. ARIZONA

The Lynx Creek Gold Pan Day Use Area, in the Lynx Lake Recreation Area, located just east of Prescott, Arizona, is primarily used for recreational gold panning. Acceptable prospecting equipment is limited to gold pans, hand tools, such as picks and shovels, and metal detectors.

Administered by the U.S. Forest Service, the site is open year round, and day-use admission is free. ([www.fs.usda.gov/recarea/prescott/recreation/recarea/?recid=67279&actid=59](http://www.fs.usda.gov/recarea/prescott/recreation/recarea/?recid=67279&actid=59))

## 4. CALIFORNIA

Gold Prospecting Adventures LLC is one of many recreational prospecting operations in the Jamestown area of California's Mother Lode Country. It offers multiple experiences for families, school and tour groups, or adventurous individuals; visitors can enjoy mine tours, panning, sluicing, highbanking, and metal detecting. Day trips and travel packages are available.

In addition, recreational miners can take advantage of three prospecting courses taught by experts. They provide practical experience in identifying a placer deposit, hunting pockets with a metal detector, and filing a mining claim. ([www.goldprospecting.com](http://www.goldprospecting.com))

## 5. COLORADO

The Arkansas River cuts through some of Colorado's richest ore bodies. Much of the land around the river is under private claim and off limits to collectors, but metal detecting goes on in the hills. The BLM maintains the Cache Creek placer, located off the river, for use by gold prospectors and the public, and panning and sluicing are allowed on a narrowly defined section of Clear Creek.

Gold Prospectors of Colorado ([www.gpoc.com](http://www.gpoc.com)), the Colorado Prospector Club ([www.coloradopro prospector.com](http://www.coloradopro prospector.com)), and Colorado Gold Camp ([coloradogoldcamp.com](http://coloradogoldcamp.com)) are good resources for those who would hunt for gold in this area. ([www.hookedongold.com/gold\\_in\\_colorado.html](http://www.hookedongold.com/gold_in_colorado.html))

## 7. GEORGIA

The Appalachian region of North Georgia was the site of a lesser-known American gold rush in 1928. Consolidated Gold Mine, in Dahlonega, offers panning instruction with its 40-minute underground mine tours. One sample pan of ore is included in the tour admission fee, and additional ore may be purchased. Experienced panning instructors help beginners with their gold recovery techniques.

Visitors can also use water-powered flumes to recover precious and semiprecious gemstones. Consolidated Gold Mine

is open seven days a week. ([www.consolidatedgoldmine.com](http://www.consolidatedgoldmine.com))

## 8. MONTANA

The state of Montana is ranked seventh in gold production in the United States. The Libby Creek Recreational Gold Panning Area is located 23 miles south of Libby, within the Kootenai National Forest. Members of the public may pan for gold within this area and keep any gold they find.

Material from the placer deposits must be processed on site and not removed. Only hand tools and pans are allowed for prospecting. ([www.libbymt.com/areaattractions/libbycreekgold.htm](http://www.libbymt.com/areaattractions/libbycreekgold.htm))

## 9. NORTH CAROLINA

At the Lucky Strike Gold & Gem Mine, in Marion, visitors can practice panning, sluicing and crevassing in the Second Broad River for a nominal fee and keep all the gold they find. Local miners provide instruction and assistance at a covered panning and screening area, and you can bring your own equipment to work the mine's highbanking area or rent it on site.

Those who pan the material from gemstone buckets at the on-site flume may find rubies, sapphires or emeralds, some of which are facet quality. ([luckystrikegoldandgem.com](http://luckystrikegoldandgem.com))

## 10. SOUTH DAKOTA

The Big Thunder Gold Mine is located in the Black Hills, a region that was host to an 1876 gold rush. Weathering continues to loosen gold from the host rock and concentrate the particles in the local streams.

Visitors can tour the Big Thunder mine with professional guides, browse a museum of mining equipment, and pan for gold on site. A half-day, off-site panning excursion is also offered, and bags of gemstone rough can be purchased and panned. ([www.bigthundermine.com](http://www.bigthundermine.com))

Gold panning is also allowed on public land in this area. For regulations and advice on identifying likely places to find gold, visit [www.blackhillsbadlands.com/home/things-to-do/outdoor-recreation/summer/goldpanning](http://www.blackhillsbadlands.com/home/things-to-do/outdoor-recreation/summer/goldpanning). 🍀



# ROCK SCIENCE

by Steve Voynick

## The Dark Dawn of Radiation Therapy

An interesting exhibit at the National Museum of Nuclear Science & History in Albuquerque, New Mexico, depicts the tragic side of the early years of medical radiation therapy. The display includes a "Revigator" and a "Radithor", two products that were used extensively during the 1920s, when many believed that the powerful radiation emitted by radium could cure virtually any ailment.

French physicist Antoine Henri Becquerel discovered the natural radioactivity in uranium ore in 1896. Two years later, French chemists Marie and Pierre Curie discovered radium, the most intensely radioactive of all natural elements.

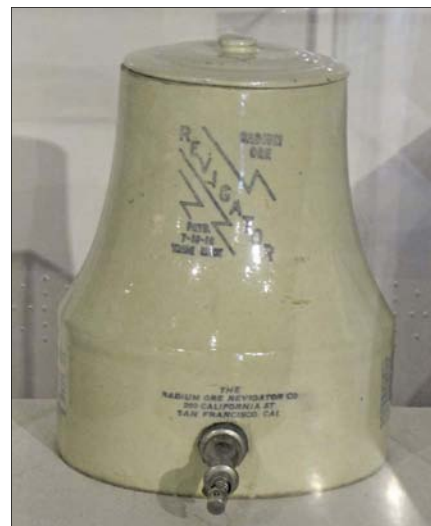
Radioactivity is the energy released by nuclear transmutation—the continuous breakdown, or nuclear "decay", of unstable heavy elements and isotopes. In the early 1900s, increasing knowledge of radioactivity became the basis of quantum theory and opened the door to a new branch of science: nuclear physics.

The radiation emitted by elements like uranium and radium can free electrons from—and thus ionize—certain atoms within the materials it strikes, and is therefore known as "ionizing radiation". When this radiation enters living tissue, it alters atomic bonds and levels of chemical reactivity to radically disrupt normal cell functions.

The initial medical conclusions regarding the effects of ionizing radiation on humans were mixed. While some researchers suffered hair loss and skin burns, and developed open lesions on their hands and fingers, others noted that radiation seemed to halt the growth of certain cancers.

By 1910, wild hopes that radiation could cure cancer and boost general well-being created a huge demand for radium. At that time, most radium came from western Colorado's carnotite (hydrous potassium uranium vanadate) ores that had originally been mined for vanadium. Colorado miners processed 100,000 tons of high-grade carnotite ore over 10 years to recover just 250 grams of radium.

Even tiny traces of radium emitted powerful radiation, and most radium was used in patent medicines and devices such as the Revigator, a large pottery crock lined with radium ore. Users filled the crock with water each night, then drank the irradiated liquid the next day. Radithor consisted of



The "Revigator" is an early medical device that was used to irradiate drinking water.

water that contained substantial amounts of two radium isotopes. At the height of the radium therapy craze, radium was used in many salves, skin lotions, toothpastes, eyewashes, and bath salts.

Marie Curie, the preeminent radiation researcher of the time, objected to these patent medicines, warning that the effects of radiation on the human body were not yet understood.

Radiation therapy took a terrible toll on the health and lives of many. Most notable was the American industrialist, athlete and socialite Eben Byers, who for years ingested large quantities of Radithor water—and lost his jaw to cancer before his death in 1932. Byers' well-publicized death helped prod the U.S. Food and Drug Administration to ban most radium "cures" and end the era of blatant radiation quackery.

Marie Curie died in 1934 of aplastic anemia, a bone-marrow disorder that was induced by long-term exposure to radium. Today's greatly advanced methods of radiation therapy are rays of sunlight that have broken through a "dark dawn".

Steve Voynick is a science writer, mineral collector, former hardrock miner, and the author of books like *Colorado Rockhounding* and *New Mexico Rockhounding*.





# JOHN E. GARSOW

**For Gems & Minerals**

**IN TUCSON**

**January 29th – February 14th, 2015**

**Arizona Mineral & Fossil Show**

**Hotel Tucson City Center (Formerly the Inn Suites)**

**Room #235**

**475 North Granada, Tucson, AZ 85701**

**Faceting, cabbing, and carving rough mineral  
specimens, faceted gems, gold jewelry,  
and so much more!**

***Come see us at a gem & mineral show near you!***

**PO Box 594, Murrieta, CA 92564**

**Phone/Fax (951) 698-4833/Cell (818) 800-5644/johngarsow@sysmatrix.net**

**[www.johngarsow.com](http://www.johngarsow.com)**



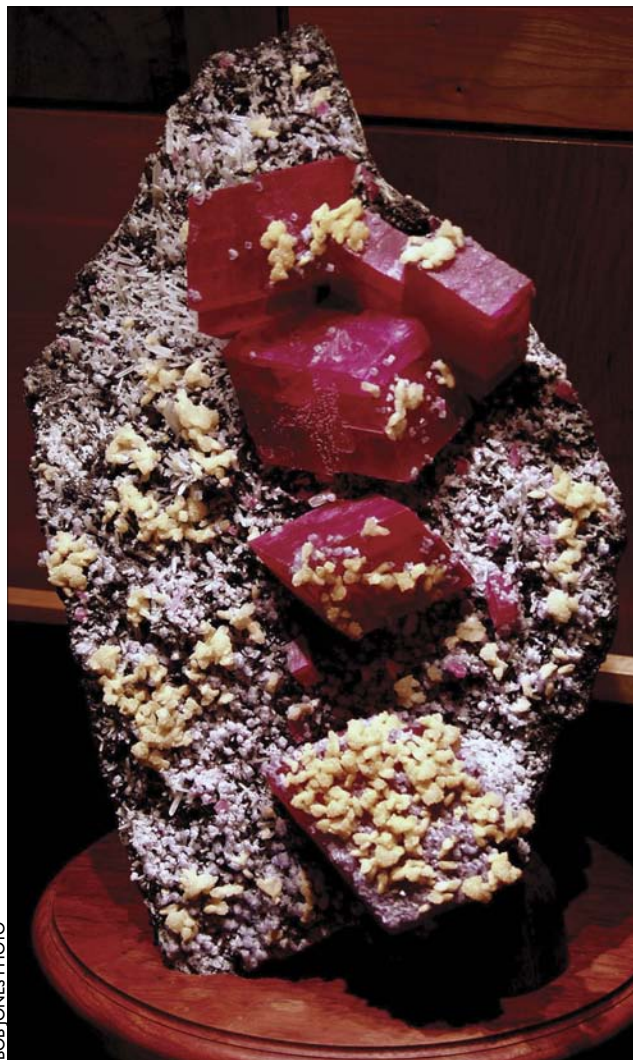
# SAVE THE RICE!

## (Museum, That Is)

### This Privately Owned Mineral Museum Needs Your Financial Support

Story and Photos by Bob Jones

Folks who live in the Pacific Northwest have enjoyed the superb exhibits in the Rice Northwest Rock and Mineral Museum for years. This remarkable facility is undoubtedly the finest privately owned mineral museum in the country. It is the place to go for rockhounds when they are anywhere in the Northwest.



BOB JONES PHOTO

Many collectors consider the Rice Museum's Alma Rose the finest specimen of rhodochrosite ever found in the world.

This museum actually far exceeds in quality many publicly supported mineral museums, due to the combination of a wide range of superbly crafted lapidary materials and an astounding collection of priceless minerals. The collections were originally assembled by Richard and Helen Rice, who began collecting in 1938.

These were what I call the "halcyon years" of rockhounding, when quantities of superb minerals were available at reasonable prices. Richard and Helen continued to collect right into the 1990s, an amazing length of time for any serious collector. The quality of their collections was so good they chose to establish a museum so the public could enjoy the fruits of their efforts. Thousands of visitors come to the museum each year.

Financial support for this museum still rests on the shoulders of Richard and Helen's daughter, Sharleen Rice Harvey. Some revenue is generated through contributions and a gift shop, but like any museum today, the Rice Museum suffers from the same problem as most museums: lack of finances.



## BUILDING THE MUSEUM

Richard loved the lapidary hobby and the gorgeous stones he worked with. Helen was most interested in crystallized mineral specimens. Richard's success in the lumber business allowed the Rices to travel some and enjoy collecting specimens. Helen's love of minerals eventually led her to get very much involved in mineral clubs. In those days, the regional federations of mineral clubs were just developing. Today, these are the groups that are protecting our opportunities to collect on federal lands, in addition to holding shows and conducting various activities that are helpful to all rockhounds.

As these regional mineral federations began forming, Helen joined with others such as Arthur Flagg, the Arizona State Curator of Minerals, to form the Northwest Federation of Mineralogical Societies (NFMS) before World War II. Today, the NFMS is one of seven regional federations that make up the American Federation of Mineralogical Societies (AFMS). Helen eventually was elected President of the AFMS. Their dedication to and involvement in the rockhounding hobby is another reason we all should support their museum.

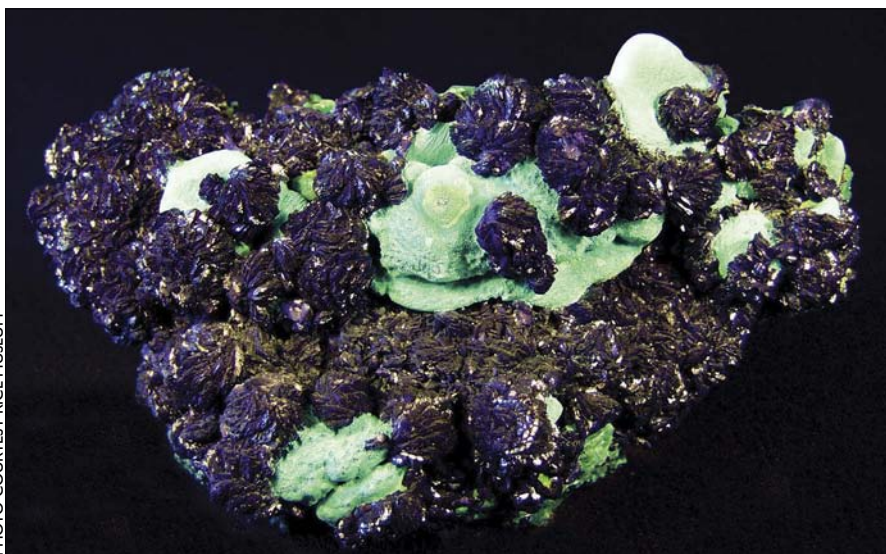
By 1953, Helen and Richard were so involved in collecting and the hobby and their wide-ranging collection had grown so much, they decided to establish a museum in their home. In 1996, the museum became a nonprofit facility, so any donations that are made to it can be taken as a tax deduction.

The Rice home is no ordinary tract house. Richard and Helen designed it to showcase their lapidary and mineral collections. Measuring several tens of thousands of square feet and designed by William Wayman, the ranch-style house was built using Arizona flagstone and Oregon maple and myrtlewood. It is a lovely setting for some of the finest minerals ever assembled in a private collection.

The house is so regal and of such importance now that, in 2006, it became the first ranch-style home in Oregon to be added to the National Register of Historical Places. What a setting for a superb lapidary and mineral collection that is open to the public!

It has been my good fortune to visit the Rice Museum through the years. Richard and Helen, whom I first met at the Tucson Show, were always gracious hosts and always gave me permission to photograph their specimens. Today, Sharleen Harvey will most likely be there to greet visitors. Though she has retired as curator, she is still deeply involved in the museum and its affairs. This helps assure that the Rice Museum remains the largest and finest private-

PHOTO COURTESY RICE MUSEUM



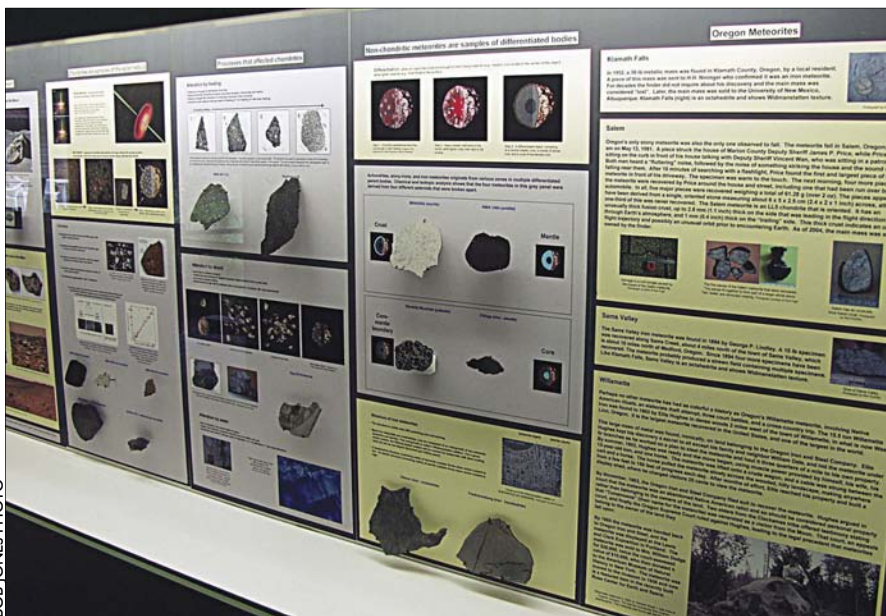
This is a remarkable example of Bisbee, Arizona, azurite and malachite on display in the crystal gallery.

BOB JONES PHOTO



The Northwest Mineral Gallery houses the finest collection of Northwest zeolites seen anywhere.

BOB JONES PHOTO



This very detailed educational display of meteorites gets plenty of attention at the Rice Museum.



PHOTO COURTESY RICE MUSEUM



One of my favorite specimens in the Mineral Gallery is this phosgenite from Italy.

ly owned mineral museum in the entire Northwest. With your help, it will continue to hold that position.

The museum is divided into a series of galleries. Richard's lapidary collection includes a superb jadeite statue that was once displayed in the Smithsonian. Fine agates, petrified wood—much of it from the Northwest—jades, and other lapidary gems occupy the Petrified Wood Gallery. Richard's wood collection has since been joined by another amazing collection donated by Dennis and Mary Murphy. The lapidary room is a real treat for folks who love such work.

For collectors who enjoy things from outer space, the museum has a delightful exhibit of meteorites. When I was there,

they had a specimen from the moon on loan. What make the meteorite exhibit extra special are the excellent educational explanations that go with it.

Education is the main thrust of the Rice Museum. School field trips have introduced literally thousands of students to the wonder of minerals and gems. Special efforts are made to involve students in the hobby. They all have an opportunity to dig into a pile of minerals in the yard and take home a starter specimen in hopes they will become collectors. In the education room, classes teach kids how to make jewelry, including gemstone necklaces.

Of course, all kids love fossils, and the Rice Museum has a delightful Fossil Gal-

lery that houses, among other things, shark teeth, ancient animals and a baby dinosaur of the genus *Psittacosaur* as a special feature.

One highlight of the mineral collection is a breathtaking suite of superb crystallized gold specimens from the Northwest. Many museums have gold specimens from California, but few can boast anything from the Northwest. The Rice gold collection numbers more than 100 specimens, all from mines located in the state of Washington!

The journey of this gold collection is interesting. The collection was assembled by a fellow named Butler, who worked at the Ace of Diamonds mine in Kittitas County, Washington. The mine produced the finest crystallized gold ever found in that state. The Butler collection was sold to a friend of mine, John Barlow. Barlow, a Wisconsin industrialist, possessed a large collection and he commissioned a group of writers to pen chapters about various mineral groups in the collection, including gold. The chapters, which Gene Laberge and I edited, were compiled into the book *The John F. Barlow Mineral Collection* (1996).

After the book was published, the specimens went up for sale and the Rice Museum purchased the Ace of Diamonds gold suite. The gold was put on display at the museum and there it stayed—until it was stolen one night! Fortunately, the specimens were recovered and they are back on display, safe and sound.

The general mineral collection of the Rice Museum holds some amazing specimens. The most valuable piece is the Alma Rose, a remarkable rhodochrosite specimen from the Sweet Home mine near Alma, Colorado. This amazing specimen has 3- and 4-inch, bright-red crystals on a crystallized matrix and is considered by many—including this writer—the finest rhodochrosite specimen ever found. When this specimen and a companion one, now called the Alma King, came up for sale, Richard bought both of them. He wanted to keep the Alma Rose, but offered the King for sale in hopes of defraying some of the cost. The Alma King now resides in the Denver Museum of Nature and Science.

My favorite specimens in the Rice mineral collection are those from Arizona, especially the copper mines of the Bisbee area, since I know them so well. The heart of the museum's Bisbee collection was once owned by Esker Mayberry, a barber in Bisbee. Mayberry displayed his specimens at the Tucson Show back in the 1960s, when it was being held in the Army-surplus Quonset hut on the county fairgrounds. The display was the talk of the show. Richard and Helen saw it and decided to buy it intact. It has marvel-

PHOTO COURTESY RICE MUSEUM



This is an exceptional example of a very rare Russian platinum mineral sperrylite in the Rice collection.

# Pull. Point. Pow.

Get a grip on fusion welding.



## Rio Grande.

Serving jewelers since 1944.



RazzaWeld® hand-held fusion welding system  
503-154

RazzaWeld® puts powerful fusion welding in your grasp. With this hand-held fusion welding system, you take the power to the piece—no more struggling to align the piece to the welder. No training is needed. Just pull the knob, push to charge, point at the workpiece, and pow!—a strong, secure weld. And, the RazzaWeld will pay for itself *FAST* (think quick production and while-you-wait repairs!).



Sharing your passion for making jewelry.  
Products. Service. Know-how.

800.545.6566

[riogrande.com](http://riogrande.com)





# Facet Shoppe

**LAPIDARY  
EQUIPMENT  
and SUPPLIES**

**Custom Faceting Service.  
Your One-of-a-Kind  
Specialist!**

**FACET ROUGH  
& CUSTOM CUT  
GEMSTONES**

PO Box 534, Burley, WA 98322  
or e-mail: facet@gemcutter.com

**(360) 443-6313  
www.gemcutter.com**

The **FOOTHILLS** Inc.



Quality Mineral Boxes (Flats)

Since 1975

200 lb. strength

Corrugated cardboard

White inside and out

The strongest in the mineral trade

Fold-ups Boxes, Inserts

**PHONE (915)726-1554 or (915)534-7095  
thefoothillsinc@yahoo.com**

## Holguin Mexican Minerals

Since 1970

Mineral specimens

Obsidian Masks

Spheres & Eggs

Arrowheads

Quality Huichol Art

PH (915) 7261554

**The Mineral and Fossil Marketplace  
1333 N. Oracle Rd., Tucson, AZ  
Space 14  
Jan. 28-Feb. 15**

## SAVE THE RICE! (Museum, That Is) from page 19

ous, bright-red cuprite specimens, superb malachite pseudomorphs after azurite, choice azurites, and a host of other specimens.

Several other Arizona specimens will fill you with envy. The Glove mine, south of Tucson, has produced the finest Arizona wulfenites—lovely butterscotch-colored modified blades—which were found in the 1950s. The museum has a superb example of these wulfenites. During the 1940s, the copper mines around Globe and Miami, north of Tucson, produced huge masses of gem chalcedony impregnated with bright-blue chrysocolla, called “gem silica” by the locals in Arizona. The Rice collection has several slabs of this limpid-blue gem material that are the best ever mined.

My personal favorites are the rare phosgenite crystals from the Island of Sardinia. Another group I really like is the epidote crystals from Green Monster Mountain, on Prince of Wales Island, Alaska. The weather conditions there are brutal, scary, and downright nasty, so anything found there is a real treasure. The Rice mineral collection is so internationally broad that every collector will find a favorite displayed in the mineral gallery.

Most collectors are familiar with the zeolites and associated minerals from the basalt quarries of the Northwest. Naturally, the Rice Museum has an amazing collection of these minerals. The collection is housed in a separate building, the Northwest Gallery, near the house. This zeolite gallery holds other minerals, as well, including a fine display of thunder eggs and explanations of how they form. Can you envision one thunder egg filled with opal that weighs 1.75 tons? Check it out when you visit the museum.

One of the museum's strongest supporters is my friend John K.K. Li, who has the finest collection of carved myrickite ever assembled. I wrote about his collection in the November 1999 issue of *Rock & Gem*. Myrickite is opal silica that has been infused with bright-red cinnabar. When it is carved, the red cinnabar patterns in the cream-colored matrix are extremely attractive. John has been kind enough to place examples of this gorgeous California lapidary rock from his valuable private collection on display in the Rice Museum.

Among the various collections and displays in the museum, one that is very popular with some visitors is the birthstone gem



**Multiple stalactites form a marvelous pattern on this big slice of rhodochrosite from Argentina.**

and mineral display. It features natural and faceted crystals.

One of my favorite exhibits at any museum—the kind of display that started me on mineral collecting in the 1930s, in fact—is fluorescent minerals. When kids walk into the Rainbow Gallery, they are amazed as the lighting switches from natural to fluorescent and drab rocks burst into a riot of colors.

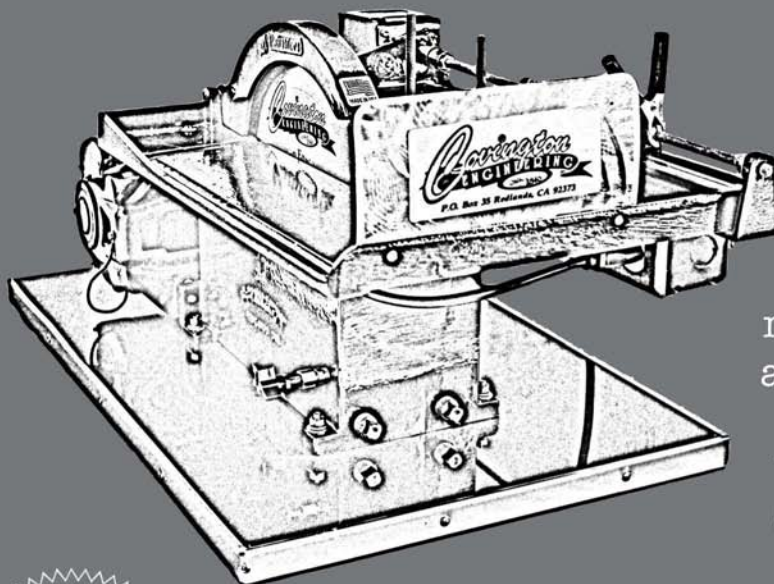
Hopefully, this description of the Rice Museum has enticed you to visit it. Its legacy, thanks to the Rice family, is a classic rockhound effort of sharing and educating. Its collection is one of the finest in this country and deserves your strong support, both physically and financially.

You can visit the museum from 1 p.m. to 5 p.m., Wednesday through Sunday. Lack of funding precludes longer hours. Saturday is a special day, as a guided tour through the museum is offered at 2 p.m.

You can also become a supporting member of the museum. There are several membership categories that are not very expensive, but are a good way to help the museum financially and offer nice benefits. Details are on the Rice Museum Web site, <http://ricenorthwestmuseum.org/>.

The museum is located just a few miles west of Portland, Oregon. Drive west on state Route 26 West, a very nice divided highway, to Exit 61, Helvetia Road. Immediately turn right as you leave the exit ramp and immediately turn left to NW 26385 Groveland Drive. The museum is in a beautiful setting in a grove of large trees on your right at the end of Groveland Dr. You'll be surprised and more than satisfied with a visit to this superb museum. 💎

# SAWS



Covington Engineering is a leader in the manufacture of trim saws and slab saws for lapidary and glass applications! We have saws from 6" to 36" and blades for every application!



## ORDER YOURS TODAY!

[www.covington-engineering.com](http://www.covington-engineering.com)

909-793-6636

## ELOXITE CORP.

**VENDORS - WE CAN SHIP TO QUARTZSITE  
FAST - CALL OR ORDER ON-LINE!**

**Rocky's stocked up on Rock & Gem QUARTZSITE SHOW SPECIALS**



**Serving the World  
Since 1955**

**MENTION ROCK & GEM** and get any or all of the **LIMITED TIME SPECIALS**. Offers expire **February 15, 2014**. To Qualify Just Mention Rock & Gem on the telephone, fax, mail, or comments box on web orders. (WY residents may be subject to sales tax.)

Call, write, or go to [www.eloxite.com](http://www.eloxite.com) to order your **FREE 108 PAGE CATALOG FULL OF OVER 3000 items** and we will send it and a copy of our latest sale flyer right away by first class mail.



**Sweet Tooth?**  
**"Jelly Bean Jaspers"**  
**FREE 1 LB. BAG** with a \$15.00 minimum Order and must mention Rock & Gem



**10% Off All MK/Barranca Lapidary Blades**  
(10% off our already low prices - get a 10 x .050 #303 Blade for only \$71.55 List \$106.00) All sizes available at special prices!



**American Made Buckle Specials**  
Choose from any of our dozens of styles of **AMERICAN MADE** belt buckles and get 10% off our already **LOW REGULAR** prices. Thousands of buckles in stock and ready to ship!

**BELOW LIST PRICES**

Check with us first for your Rockhound Supplies, Lapidary Findings and Belt Buckles for Cabs or Coins (almost all **AMERICAN MADE**), Lapidary Equipment, Diamond - Blades, Tools, & Wheels, Wire Craft Items, Gift Items, Beads & Beading Supplies, and **MORE!** Over 3000 Items in Stock. Quantity discounts available!

Visit our On-Line Store at [www.eloxite.com](http://www.eloxite.com)

**PHONE (307) 322-3050**

or write: Eloxite Corp.; Dept. 5; 806 10th Street; Wheatland, WY 82201  
Fax (307) 322-3055



## Very Large Cabs

My favorite lapidary activity is making very large cabochons. My reasons doing it include the impact that large cabs have in a display case and the ability to preserve more of the patterns in the rough material.

When I say very large cabs, I mean up to 7 inches across, which is the largest I have done. Many times, as you look at the patterns in the slab, it becomes evident that cutting the slab into preforms for smaller cabs will destroy the visual appeal and impact of those patterns. This mandates a different approach. One thing that can be done is to polish the slab and display it as is, with its natural features, but unfortunately those natural features often are not particularly attractive and distract from the overall beauty of the material. Making large cabs lets you exclude these less attractive features from your finished cab.

When choosing the slabs for large cabs, you'll need to look for an attractive pattern or color that appeals to you and is spread across the slab, which should be fracture free. Brazilian agate is my favorite lapidary material for this because it can be readily found in large, fracture-free slabs at a reasonable price. Many types of jasper, petrified wood, and obsidian can also meet these criteria.

Another important item is the thickness of the slab. To get a good dome on cabs larger than 3½ inches across, the rough must be at least ¾ inch thick. For even larger cabs, the slab should be 1 inch thick.

I use drafting templates to make my outline on the slab. Manual drafting is a declining activity and most office supply stores no longer carry these templates, so you will need to go online to find them. They come in many large sizes and in round and oval shapes. I choose which size and shape to use by what slab pattern or partial pattern will work best in the desired template. I mark the shape on the slab with a black ballpoint pen because these pens make marks that are quite durable and the line is thin and quite visible.

If the material is dark, like most obsidian types are, I use a marker made from a brass or aluminum rod, which can be found at most large hardware stores. Aluminum markers can also be made from knitting needles. Sharpen the points of these metal markers so that the line is clear and thin. If the preform

outline drawn on the slab is thick and blurry, then the odds of grinding the preform to an accurate outline are reduced. Precision and accuracy throughout the cabling process distinguishes a true craftsman from those who hurry through the process.

Trimming the slab down to the drawn outline is a straightforward process, providing you allow for the width of the saw blade as you draw the trim lines. Because these preforms are quite large, it is best to always draw these cut lines rather than eyeball the cut. If the cut impinges on the drawn girdle line, you have made the first step away from accuracy and precision. Trying to compensate for the missing girdle mark compounds the inaccuracy.

One important thing that is necessary to do the trimming is a large enough table surface on your trim saw. My saw is an 8-inch Lortone machine. I prefer to use the MK 303 .025-inch-thick blade with a light cutting oil. A thinner blade cuts faster and wastes less material.

I use a light oil in the saw for two reasons: One is that most blade manufacturers recommend using oil for maximum blade life and cutting ability, and the other is that I don't have to contend with water and additives to prevent rust, which is troublesome and time consuming. Water isn't a good blade lubricant because it doesn't have very good lubricating qualities. It also isn't a good coolant because, at the point of contact between the diamonds in the blade and the rock, the instantaneous heat buildup is such that the water flashes to steam. Steam is a poor heat conductor; this degrades the diamonds faster. Oil has a much higher flash point and better lubricating qualities.

Some cutters prefer water because the cleanup is easier. I have a tray of generic cat litter beside my saw and, as I cut a piece off the slab or rock, I wipe the excess oil off with a rag and place the stone in the litter. I leave it there for a few hours, and all of the oil is absorbed. If I'm in a hurry to start grinding on the cab perform, after wiping most of the oil off, I wash the slab in detergent to remove the residue.

In the next part of the large cab-making series, I will discuss slab trimming and the safety issues involved with working with a trim saw. 💎



Bob Rush has worked in lapidary since 1958 and metal work and jewelry since 1972. He teaches at clubs and at Camp Paradise. Contact him at [rocksbob@sbcglobal.net](mailto:rocksbob@sbcglobal.net).






# POLYHEDROIDS

## The Gem Shop, Inc.

W64N723 Washington Ave  
Cedarburg, WI 53012  
www.thegemshop.com  
262-377-4666

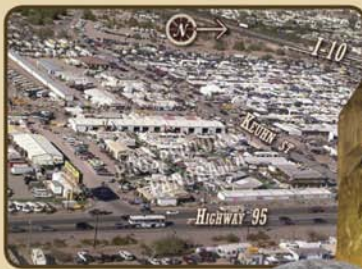
Tucson Showplace Space A-1  
Tucson Office: 520-884-1870




**Prospectors' Panorama**  
in Quartzsite, Arizona

Jan 2nd –  
Feb 15th

**Gems, Jewelry,  
Minerals, Beads & More!**



**Located At**  
35 West Kuehn St.  
Quartzsite, AZ 85346



For more info call:  
**520-360-7718**  
or visit [prospectorspanorama.com](http://prospectorspanorama.com)

## MAIN AVE FOSSIL & MINERAL SHOW

in Tucson's Fossil & Mineral District

Jan 31st – Feb 15th

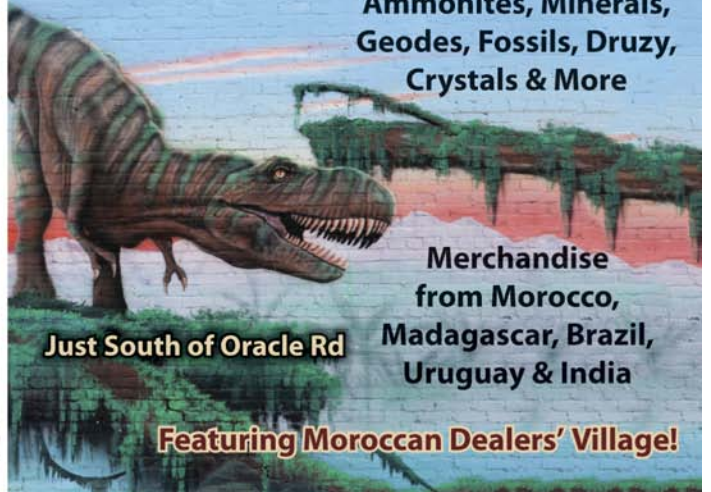
1202 N Main Ave  
Tucson, AZ 85705

Look for the T-Rex Building

**Ammonites, Minerals,  
Geodes, Fossils, Druzy,  
Crystals & More**

**Merchandise  
from Morocco,  
Madagascar, Brazil,  
Uruguay & India**

**Featuring Moroccan Dealers' Village!**







# THE NORTH STAR Mining Museum

## Gold Mining History in Grass Valley, California

Story and Photos by Marc Davis

The hardrock gold mines in Grass Valley, California, were major producers dating back to the early days of the California gold rush. In June 1850, George McKnight was the first to discover gold in a quartz outcrop in the Grass Valley area. According to the State of California Division of Mines Bulletin 141, this find was “... so rich and plentiful for a time, that the miners feared gold would lose its value”. Relics from this rich gold-mining period are preserved in the North Star Powerhouse Mining and Pelton Wheel Museum.



This sample of ore from the North Star mine, one of many hardrock gold mines in Grass Valley, California, is mostly quartz with some sulfides.

A flurry of prospecting around Grass Valley followed McKnight's impressive strike, resulting in numerous other discoveries of gold in hardrock. By the end of the year, gold in quartz outcrops had been located at Ophir Hill, Massachusetts Hill, Rich Hill, and other locations. In 1851, gold in quartz was also discovered on property that would become the North Star mine. The North Star would eventually develop into one of the largest and deepest gold mines in Grass Valley.

From its beginnings until 1929, the North Star operated under various owners, producing nearly 1.5 million ounces of gold. In 1929, the Newmont Mining Corp. purchased the North Star and combined it with the famous Empire mine and others, forming the Empire-Star Mines Co. The Empire-Star mines operated into the mid-1950s, when the fixed price of gold, combined with rising costs, made operations unprofitable and the mines shut down, ending more than 100 years of underground mining activity in Grass Valley.

For years after the mines closed, the North Star mine powerhouse building sat vacant and in partial ruin on one end of the old mine property. The owners of the mine deeded the powerhouse and a small portion of land to the city of Grass Valley. Today, the powerhouse has been restored and is open to the public as a museum, where a countless number of mining artifacts are on display.

The historic building is packed with various types and sizes of mining equipment, from the massive Pelton wheel that was used to power the mine to small cupels used by assayers checking the value of ore. Anyone who is interested in mining and mining history will be absolutely captivated by the numerous displays.

Outside the building, the grounds contain an equally impressive collection of equipment. The unique aspect of this museum is that much of the equipment, both inside and out, is in operable condition and can be turned on by the museum staff so visitors can watch it in action!

Some displays in the museum are dedicated to illustrating the changes in mining technology that occurred over the years. One diorama depicts early hand-drilling techniques used to create holes in solid rock in preparation for blasting. Two-man teams typically carried out the hand-drilling operation known as "double jacking". The process consisted of one miner holding a drill bit while the second man struck the bit with a long-handled sledgehammer.



**The original North Star mine powerhouse building has been restored and now houses a mining and Pelton wheel museum.**



**Docent John Bridges fires up the steam donkey, which is now powered by compressed air. Steam donkeys were capable of pulling heavy loads up steep terrain using a cable attached to a revolving drum on the donkey.**

When the situation dictated that only one miner was drilling, a short-handled hammer and chisel-like drill bit were employed in the process known as "single jacking". After the holes were drilled, they were packed with black powder and the face of the rock was blasted. In this manner, the miners would follow the ore body underground, advancing the tunnels as they followed the vein.

By the 1870s, compressed air drills replaced hand drilling in many of the mines. Another diorama in the museum illustrates this method of drilling. Sadly, early versions of air drills created a great deal of rock dust that was hazardous to the miners. It wasn't until 1900 that, according to information at the museum, a compressed air drill was invented that injected water into the drill bit, minimizing the dust prob-

lem. Besides the diorama, a number of different air drills and drill bits are on display in the museum.

Another improvement in mining technology was the use of dynamite and blasting caps instead of black powder as the explosive of choice. This is illustrated in another diorama. In addition, there is an early dynamite-packing machine on display. This machine packed a mixture of sawdust, nitroglycerine, and sodium nitrate into paper casings at a rate of 16 sticks per minute. The machine in the museum, originally built in 1899, has been restored by volunteers and is now in operable condition. Helpful docents at the museum are happy to turn it on so visitors can see it function. Of course, there is no nitroglycerine in the mix these days.





HUGHES ASSOCIATES

## QUALITY PRODUCTS FOR OVER THIRTY YEARS

EPOXY 220 .....amber clear bonding  
EPOXY 330 .....water clear bonding  
TENAX .....instant super glue  
TENAX + PLUS ...a thick instant adhesive  
OPTICON 224 .....fracture sealer  
ATTACK .....epoxy solvent

## AT YOUR DEALER Hughes Associates

18116 Mtka. Blvd., Wayzata, MN 55391  
phone: 952-404-2626  
fax: 952-474-4636

## ABRASIVE GRIT & POLISH

100% VIRGIN  
SILICON CARBIDE  
STRAIGHT GRADED  
30 - 1200 GRIT

TIN & CERIUM OXIDE  
PLASTIC PELLETS  
CORN COB  
WALNUT SHELLS  
MOUNTED STONES

EXCELLENT PRICES  
OUTSTANDING SERVICE

CALL FOR PRICE LIST

jesco products, inc.

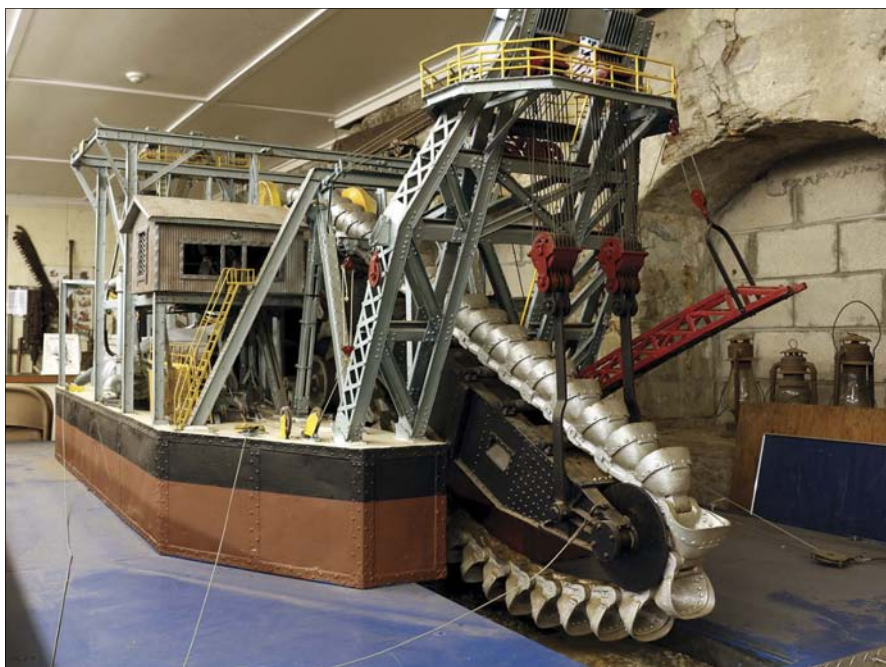
1-800-422-GRIT

ORDER 24 HRS A DAY @

www.jescoproducts.com

email: jesco@jescoproducts.com

IN BUSINESS SINCE 1986



This working model of Yuba Consolidated Dredge No. 17 was built for display at the 1915 Panama-Pacific Exposition.

The blasting operations that were carried out in the underground workings of the North Star mine sufficiently broke up the rock to allow much of the ore to be hauled to the surface without breaking it down further. Then the process of milling the ore and recovering the gold was started.

Various types of equipment used in the milling process are on display at the museum, including a working stamp mill. This massive piece of equipment has a battery of five cylindrical iron stamps, each weighing 900 pounds, that can be activated by a museum docent upon request. The stamps are raised and then free fall with a thunderous boom. When actually used to mill ore, the stamps were dropped at a combined rate of about 90 times per minute, smashing the quartz rock that fed the machine into tiny bits.

Water was added to the ore in order to keep the dust down, and mercury was added to the mortar box surrounding the stamps to collect the gold. The water and crushed ore, along with the constant hammering of the stamp mill, created a slurry in the mortar box. When the particles in the slurry were roughly 20-mesh in size, they would pass through a screen and flow onto large copper sheets that were coated with mercury.

The gold and mercury would form an amalgam, and much of the gold would be trapped on the plates. Workers would periodically retrieve the amalgam from the stamp mill mortar box, scrape the amalgam off the plates, and further process it, recovering the gold.

While much of the gold was captured in this process, the slurry that flowed off the mercury plates still contained some gold.

The method used to recover this gold at the North Star in 1918 is described in a report published in that same year by the California State Mining Bureau. According to this report, titled "Mines and Mineral Resources of Nevada County", the auriferous material flowing off the plates was classified by size and the sands were concentrated on Deister shaker tables.

There is a large Deister table on display at the museum. It, too, is operable and can be activated by one of the docents. Although water is not used in the demonstration, seeing the table operate, one can picture how the gold-bearing sands were discharged onto the tabletop, where a combination of shaking motion and water flow propelled the material across the riffles built into the table, separating the richer material from the less valuable.

Concentrates of richer sand were sent through a grinder and then passed over amalgamation plates. The less valuable material along with the tailings was sent to the North Star mine cyanide plant for further processing.

Although not used in the milling process, a Cornish pump is on display outside the museum building. This type of pump served the vital purpose of dewatering deep, underground gold mines throughout California. According to sources at the museum, their pump ran for many years at the Sneath-Clay mine in nearby Nevada City, and it may now be the last of its type that is still operable. Constructed of large timbers and various iron pieces, the entire assembly of this pump is over 60 feet long.

Cornish pumps were first developed in the 1800s to remove water from the tin mines in Cornwall. The technology was





This 30-foot-diameter Pelton wheel supplied power in the form of compressed air to the North Star mine.

brought to California during the gold rush, when the pumps were instrumental in the development of deep underground gold mines. A publication available at the mine, *The Cornish Pump in the California Gold Mines*, describes a massive pump that was used at the North Star mine: "The pump rod, nearly half a mile long, was made of wood spliced together with iron plates bolted on, was supported on rollers, and followed the shaft, which varied in pitch from 10 degrees to 40 degrees. ... Think of a mass of wood and iron strung out for a distance of half a mile and weighing altogether over 135,000 pounds, moving back and forth 6 feet at a stroke, four times a minute."

Besides the underground mining equipment, there are a number of displays that center around recovering gold that has already broken free from the host rock. This type of gold is found in the form of flakes and nuggets and is known as "placer" gold.

Some placer mining equipment on display around the museum includes a number of hydraulic monitors. These giant nozzles were used to wash down millions of cubic yards of dirt from hillsides in which placer gold had been discovered. One monitor located in the rear yard of the museum is billed as the largest ever built.

Another interesting placer mining relic in the rear yard of the museum is a 4,500-pound dredge bucket. A number of gold dredges equipped with an entire line of these buckets operated in California and other states for many years. The buckets on these dredges were attached in a loop, forming a chain or bucket line.



**MiniScale.us®**  
Precision Scales for Gems, Minerals,  
Fossils, Meteorites, Jewelry and Beads

**TANITA®**  
THE STANDARD by which all others are measured

**CAN'T BE BEAT ON QUALITY,  
WON'T BE BEAT ON PRICE!  
GUARANTEED!**

Visit us at the AGTA Gem Fair  
February 3-6, 2015 ~ Booth #2202 or  
Call us at (224) 595-2042 or  
Email us at [specials@miniscale.us](mailto:specials@miniscale.us)  
from February 1<sup>st</sup> to Feb 10<sup>th</sup> and  
a Tanita team member will personally  
deliver your purchase to your location!



Photo by Anton Walz Jr.

**SHOW SPECIALS**



**KD-200  
High Capacity  
Mineral Scale**



**1479 Series of  
Precision Mini Scale**



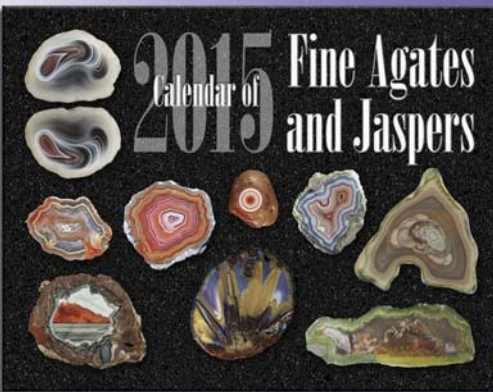
A special bundle  
package consisting  
of a KD-200 with  
any 1479 Series will  
be offered for **\$100<sup>00</sup>**

Stop by Booth #2202 at the  
AGTA show to receive your  
**FREE 120 gram pocket scale.**  
1 per customer while supplies last.

**MiniScale.us**  
8166 304th Ave. SE  
Preston, WA 98005  
Phone: (866) 679-3343  
**Authorized Tanita Distributor**

R&GLT2/2015

**2015 Calendar of Fine Agates & Jaspers**



**2015 Calendar of Fine Agates and Jaspers**

12 - 8.5"x11" color photos...  
Bulgarian Agate, Laguna Agate,  
Sagenite, Ocean Jasper & more...  
\$11.95 + \$2.50 S/H ea.  
MC/Visa/Ck/MO/PayPal  
quantity discounts available

**Show Schedule**  
Tucson Showplace Space A-1  
January 30-15, 2015

**The Gem Shop, Inc.**  
W64N723 Washington Ave  
Cedarburg, WI 53012  
Toll Free Orders: 866.377.4666  
[thegemshop.com](http://thegemshop.com)  
[mail@thegemshop.com](mailto:mail@thegemshop.com)



A Whole World of Fine

## PEARLS

All Kinds of Better Natural Stone  
**BEADS**



All Sorts of  
Calibrated Better



## GEMSTONES

Useful Jewelry  
& Beading

## TOOLS



**StachuraWholesale.com**

*Your Trusted Supplier since 1955*

**Joseph P. Stachura Co., Inc.**

435 Quaker Highway, Rt. 146A  
Uxbridge, MA 01569-1602

T: 508.278.6525 F: 508.278.9458

### OPAL Identification & Value

By Paul B. Downing, Ph.D.



**NO TWO OPALS ARE ALIKE...**

This revised and expanded version includes new types of opal as well as updated methodology and prices for properly characterizing and placing a value on any opal.

*Hardback - 224 full color pages  
Over 300 spectacular photos*

**Order Today**

**\$49.95 FREE SHIPPING!**

Call **(480) 318-4171** or  
MajesticPress@aol.com

Majestic Press

P O Box 17121, Fountain Hills, AZ 85269

## The NORTH STAR Mineral Museum *from page 27*



Visitors to the museum can pump the hand-operated double action bellows. This 150-year-old restored specimen was used to expel blasting fumes from blind tunnels.

The revolving buckets were lowered into the bottom of the dredge pond, where they would dig up gold bearing gravels. They emptied their loads into a large trommel screen, where the auriferous gravels were classified according to size. Oversized material was discarded, while smaller material was further processed to separate the waste from the gold.

A related item is a large, working model of a bucket-line gold dredge. Built for display at the Panama-Pacific Exposition in San Francisco in 1915, this model is 15 feet long and is a replica of Yuba Consolidated Dredge No. 17. When the docent flips the switch, the whole dredge seems to come alive. The buckets bump around the bucket line, the trommel revolves, and the stacker belt spins into action. The actual No. 17 dredge operated in the Hammonton mining district of California until 1966. One dredge of this type is still active in these goldfields near Marysville, California.

In the yard outside the museum, a recently restored and operating steam donkey is on display. The steam donkey had a vertical boiler tank and pistons that powered a revolving drum-and-cable assembly. One end of the cable could be attached to a heavy load to move it. Invented in the early 1880s

by John Dolbeer, these steam-powered engines were used in the mining industry for construction and to lift large loads. They were also widely used in the timber and shipping industries. The restored donkey at the mining museum was used at the Wisconsin Quartz mine near Graniteville, California. It now runs on compressed air, allowing for instant demonstrations, rather than waiting for steam to be generated.

Perhaps the showcase item of the museum is the monumental, 30-foot-diameter Pelton Wheel that was used to generate power for the North Star mine. According to publications available at the powerhouse museum, Lester Pelton developed this type of waterwheel in the late 1870s and patented it in 1881. His wheel was superior to others available at the time because each of its water-catching buckets was divided into two rounded halves with a split in the middle. A high-pressure jet of water was directed against the split. This caused the wheel to spin, but more significantly, the split directed the incoming water off to the sides of the bucket. This kept rebounding water from splashing back against the incoming jet or the next bucket in line. This design proved superior to conventional low-pressure water wheels and





KRISTALLE  
Est. 1971

From beginners to advanced collectors,  
we have superb minerals for everyone.

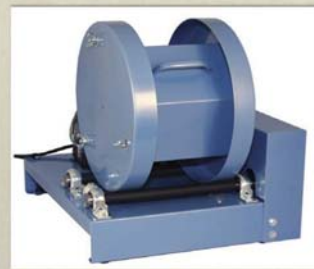
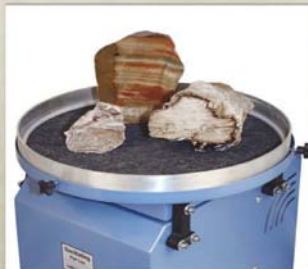
[www.kristalle.com](http://www.kristalle.com)

Kristalle  
Wayne and Dona Leicht  
Laguna Beach, California, USA  
+1.949.494.5155 ~ [info@kristalle.com](mailto:info@kristalle.com)

# LORTONE, inc

*Manufacturing Lapidary Equipment locally for over 50 years!*

Tumblers  
Flat Laps  
Trim Saws  
Arbors  
Slab Saws  
Abrasives



12130 Cyrus Way, Mukilteo, WA 98275 • Phone: (425) 493-1600 • Fax: (425) 493-9494  
e-mail: [equipment@lortone.com](mailto:equipment@lortone.com) • [www.lortone.com](http://www.lortone.com)



# MLS®

Minnesota Lapidary Supply

**"YOUR LAPIDARY  
GENERAL STORE"**

For EQUIPMENT and SUPPLIES

Some of the Equipment and Supplies we stock:

- Tumblers • Arbors • Drills
- Abrasives • SiC Wheels • Laps
- Polishes • Diamond • Books
- Saws • Wheels • Cutting Oil
- Blades • Belts • Tools

Some of the many vendors we stock:

- Lortone • MK • MLS
- Estwing • Mini-Sonic • Diamond
- Calway • Hughes • Pacific
- Foredom • Raytech • Cascade
- Lapcraft • Gryphon • Tru Square

Please contact us for our **FREE** Catalog !!

**Minnesota Lapidary Supply**

201 N. Rum River Drive

Princeton, MN 55371

Ph/Fax: (763)-631-0405

e-mail: [sales@lapidarysupplies.com](mailto:sales@lapidarysupplies.com)

Our Hours are:

Sun. & Mon. --- Closed

Tues. thru Fri. --- 9:00 a.m. to 5:00 p.m. CST

Sat. --- 9:00 a.m. to 4:00 p.m. CST

## NEW ERA GEMS

Please call for our  
**2013-2014 COLOR CATALOG!**  
Be sure to check our web site  
[www.neweragems.com](http://www.neweragems.com)

### 2015 SHOW SCHEDULE

**JAN 30-FEB 11, 2015**

Pueblo Gem & Mineral Show - Room # 110  
The River Park Inn (formerly the Pueblo Inn)  
350 S. Freeway, Tucson, AZ 85745

Daily 10am-7pm.

**JAN 31-FEB 14, 2015**

Arizona Mineral & Fossil Show  
Hotel Tucson - Pershing Suite  
475 Granada, Tucson, AZ

Daily 10am-6pm, Sat Feb 14 10am-5pm

**Happy New Year From All of us  
at New Era Gems**

[www.neweragems.com](http://www.neweragems.com)

### WE TRAVEL DIRECT TO TANZANIA

We're displaying a wide variety of faceting rough,  
cabbing rough, cut gems, mineral specimens  
and fine stone carvings.

### New Era Gems

14923 Rattlesnake Rd., Grass Valley, CA 95945

CALL US TOLL FREE 1-800-752-2057

(530) 272-1334 FAX (530) 272-2985

email: [neweragems@hotmail.com](mailto:neweragems@hotmail.com)

[www.neweragems.com](http://www.neweragems.com)

## The NORTH STAR Mineral Museum from page 28



Gold dredges were equipped with an entire line of 4,500-pound buckets, attached in a loop, that would dig up gold-bearing gravels from the bottom of the dredge pond.

the competing high-pressure water wheel designs available at the time.

According to an article published in the May 24, 1883 edition of the *Grass Valley Daily Union* newspaper, a contest had been conducted involving four different designs of high-pressure water wheels. Of the four, the Pelton wheel was judged to be the most efficient. It was found to have a rating of 90.2% efficiency, while the closest competitor came in at 76.5%. After winning the contest, the Pelton wheel grew rapidly in popularity.

According to Nevada County Historical Society Bulletin, Vol. 65, No. 3, (available for purchase at the museum), the management of the North Star in 1885 had to make a choice between different sources of power to run their mine. Electricity was considered, but at that time it was still rather new technology. The superintendent of the mine was not convinced that electricity could be used safely underground. Compressed air generated by compressors connected to a Pelton wheel was selected as the source of power, instead.

According to information at the museum, the original Pelton wheel that provided power for the North Star mine was an 18.5-foot-diameter wheel. High-pressure water to run the wheel was obtained by constructing a 7,000-foot long pipeline made of 20-inch diameter steel, riveted pipe. Water feeding the pipeline was coming from a higher elevation, creating a head of about 750 feet, resulting in a water pressure of 354 pounds per square inch at the nozzle powering the Pelton wheel.

The pipeline had to cross Wolf Creek, flowing just outside the powerhouse, in order to reach its destination. To accomplish this crossing, a stone aqueduct was constructed to carry the pipeline over the creek.

Though it no longer delivers water to the powerhouse, the pipeline remains in place today and the aqueduct serves as a footbridge leading to shady picnic grounds.

Back in the late 1800s, as the mine continued to grow, so did its need for power. The management decided that a larger wheel would be needed to power the growing mine. In 1898, the decision was made to incorporate a 30-foot-diameter Pelton wheel with larger air compressors into the powerhouse. Once constructed and installed, the new wheel turned at 65 revolutions per minute, generating 1,000 horsepower. It was connected to a set of compressors that developed compressed air at 90 pounds per square inch.

This massive wheel operated until 1933, when it was replaced by electric motors. When the mine was being decommissioned in the 1950s, the wheel was about to be scrapped. Fortunately, it was saved by concerned citizens and is on display at the museum. This massive wheel can also be operated by museum staff and is a sight not to be missed.

The museum has additional Pelton wheels of all different sizes, including the first cast-iron Pelton wheel ever built. In the 1800s, this 2-foot-diameter wheel powered equipment in a local machine shop.

The North Star Powerhouse Mining and Pelton Wheel Museum is located at 10933 Allison Ranch Road in Grass Valley. The museum is open Wednesday through Saturday, 10 a.m. to 4 p.m., from May through October, and admission is by donation. Call (530) 273-4255 or visit [www.nevada-countyhistory.org/html/mining\\_museum.html](http://www.nevada-countyhistory.org/html/mining_museum.html) for details. ♦

49th  
Annual

# WHERE IT ALL BEGAN...

## QUARTZSITE POW WOW GEM AND MINERAL SHOW AND RELATED HOBBIES

**SPONSOR - QUARTZSITE IMPROVEMENT ASSOCIATION**

**-- FREE PARKING -- FREE ADMISSION --**

JAN. 21 - JAN. 25, 2015 Wednesday thru Sunday  
Field Trips Daily by Quartzsite Roadrunner Gem & Mineral Club  
Food Served Daily Jan. 21 - Jan. 25  
7 am-7 pm Cafeteria Style + Vendor Food Line

### **- NOTICE TO BUYERS -**

**Truly the buyers market of the world  
Over 500 outdoor sites and 10,000 square foot building**

For Dealer Information write Show Chairman - QIA, P.O. Box 881, Quartzsite, AZ 85346-0881  
Phone: (928) 927-6325 Fax: (928) 927-4503  
E-Mail: [PowWow@QiaArizona.org](mailto:PowWow@QiaArizona.org) Web Site: [www.QiaArizona.org](http://www.QiaArizona.org)  
Sales Tax License Required by AZ Department of Revenue  
Quartzsite Vendor Selling Permit Required - Purchase prior to show @ QIA



Displays from  
around the world

Dealers with gems

- Minerals -
- Jewelry -
- Beads -

Demonstrations

Wire wrap supplies  
and Much More...

## SELL Rock&Gem IN YOUR SHOP

*You can sell Rock&Gem magazine in your shop and  
make a 50% profit on every copy you sell, risk-free.*

We sell the magazines to you for 50% off the cover price. So you make a 50% profit  
on every copy you sell. And every copy you don't sell is eligible for a full credit!  
Or you can order at 50% off with no credit privileges. Minimum order is 10 copies.

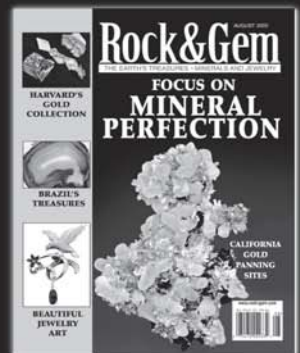
We ship the magazines to you, shipping is \$5.00. For the copies you don't sell,  
you simply send back the torn-off covers.

**You'll receive yours BEFORE the regular newsstands get theirs!**

Once your customers know you have copies first, they'll come to your shop, every month, to buy their copies.  
This will increase your customer base and increase sales of your store's inventory!

So you only pay for what you sell, you make a profit on every copy you sell, you get a credit for  
every copy you don't sell, and you increase your customer base!

**Call (239) 280-2380 and ask for Dealer Sales, or email [dealers@beckett.com](mailto:dealers@beckett.com)  
and start selling Rock&Gem in your store today!**





**February 2015**

**06-08—Roseville, California:** Wholesale and retail show; Gem Faire Inc, Placer County Fairgrounds, 800 All America City Blvd; Fri. Noon-6pm, Sat. 10am-6pm, Sun. 10am-5pm; Admission \$7, Children free (ages 0-11); Fine jewelry, precious & semi-precious gemstones, millions of beads, crystals, gold & silver, pearls, minerals & much more at manufacturer's prices. Exhibitors from around the world. Jewelry repair & cleaning while you shop. Free hourly door prizes. Contact: Yooy Nelson, (503) 252-8300; e-mail: info@gemfaire.com; Web site: HYPERLINK "http://www.gemfaire.com" http://www.gemfaire.com

**13-15—KIRKWOOD, MISSOURI:** Annual show; Cabin Fever Productions, Inc., Kirkwood Community Center, 111 South Geyer Road; Fri. 04:00 pm-09:00 pm, Sat. 10:00 am-06:00 pm, Sun. 10:00 am-04:00 pm; Admission \$3.00, Seniors \$2.00 65+, Students \$2.00 12-18, Children Under 12 Free; Rocks, minerals and fossils for everyone from novice to expert collectors. Jewelry and gems to add sparkle to your cold, dull winter. Unusual and unique finds for gift giving or yourself. Upscale jewelry finds. A great family outing - bring the kids! See website for additional information on admission, participating dealers, etc, or e-mail with questions. Like us on Facebook www.facebook.com/CabinFeverProd; contact: Bruce Vick, 1801 Barbary Way, Swansea, IL, 62226, (618) 973-7222; e-mail: cabinfeverprod@aol.com; Web site: HYPERLINK "http://www.cabinfeverprod.com" www.cabinfeverprod.com

**14—UPPER MARLBORO, MARYLAND:** Annual show; Southern Maryland Rock and Mineral Club, The Show Place Arena, 14900 Pennsylvania Ave.; Sat. 10:00-5:00; Admission \$5, Seniors (65+) \$4, Students (12-17) \$4, Children 12 & under free; Displays of fossils, minerals, geodes, and other material related to the earth sciences. Exhibitors and vendors will be selling minerals, fossils, gems, jewelry, crystals, meteorites, jewelry findings, and tools. There will be free demonstrations of jewelry arts, gold panning, flint-knapping, and a fluorescent rock display. Crafts for children will include a mini-mine and fossil making. Scouts can earn achievements in geology (e.g. Cub Scout Belt Loops, Boy Scout Merit Badges). Door prizes will be awarded every 1/2 hour.; contact: Michael Patterson, 11000 Thrift Road, Clinton, MD, 20735, (301) 752-5763; e-mail: michael.patterson@pgparks.com; Web site: www.smrmc.org

**20-22—SANTA BARBARA, CALIFORNIA:** Wholesale and retail show; Gem Faire Inc, Earl Warren Showgrounds, 3400 Calle Real; Fri. Noon-6pm, Sat. 10am-6pm, Sun. 10am-5pm; Admission \$7, Children Free (ages 0-11); Fine jewelry, precious & semi-precious gemstones, millions of beads, crystals, gold & silver, pearls, minerals & much more at manufacturer's prices. Exhibitors from around the world. Jewelry repair & cleaning while you shop. Free hourly door prizes.; contact: Yooy Nelson, (503) 252-8300; e-mail: info@gemfaire.com; Web site: HYPERLINK "http://www.gemfaire.com" http://www.gemfaire.com

**FEB. 27-MAR.01—COSTA MESA, CALIFORNIA:** Wholesale and retail show; Gem Faire Inc, OC Fair & Event Center, 88 Fair Dr; Fri. Noon-6pm, Sat. 10am-6pm, Sun. 10am-5pm; Admission \$7, Children free (ages 0-11); Fine jewelry, precious & semi-precious gemstones, millions of beads, crystals, gold & silver, pearls, minerals & much more at manufacturer's prices. Exhibitors from around the world. Jewelry repair & cleaning while you

continued on page 36

# Fine Jewelry



# Beads



# Minerals

# Gems

# Crystals



(503) 252-8300 **GemFaire.com**

# GEM FAIRE

**\*Join the Gem Faire Community\***

- ✓ Competitive booth prices!
- ✓ Professional booth set up!
- ✓ Earn higher profits!
- ✓ Meet face to face with your customers, giving them a hands-on purchasing experience!

!!! Download Contract Today !!!  
**GemFaire.com**

## Upcoming Schedule

2015	JAN. 2, 3, 4	SANTA ROSA, CA
	JAN. 9, 10, 11	HILLSBORO, OR
	JAN. 16, 17, 18	DEL MAR, CA
	JAN. 23, 24, 25	SAN RAFAEL, CA
	JAN. 30, 31, FEB. 1	MONTEREY, CA
	FEB. 6, 7, 8	ROSEVILLE, CA
	FEB. 20, 21, 22	SANTA BARBARA, CA
	FEB. 27, 28, MAR. 1	COSTA MESA, CA
	MAR. 6, 7, 8	DEL MAR, CA

First \_\_\_\_\_ Last \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

- one -  
**FREE**  
admission

Complete and bring this ad to receive one FREE admission. Must present original ad. Photocopy not accepted. Limit one per person. Property of Gem Faire, Inc, can be revoked without notice. Non-transferrable.



RG1/15

# All New for Tucson

300+ Specimens from the Arizona Collection of Les and Paula Presmyk  
Bisbee, Tiger, Morenci, Ajo, Globe-Miami and many more localities

Sharleen and Bill Harvey Collection of Hillsboro, Oregon

50+ Select Specimens

Fluorite on Quartz after Calcite

La Fluorita Dulcita Prospect, Cochise County, Arizona

## Tucson Gem & Mineral Show

Booth 616 - 620

Feb. 12 to Feb. 15, 2015



*De Natura*

[www.denatura.net](http://www.denatura.net)

P.O. Box 1273 | Gilbert, AZ 85299

602-370-0639



## LED Lighting

**New and Affordable  
with 4 color temperatures.**

*All of the light and none of the heat!*

**No exhibit too small or too large**

All of the Tucson showcases have our lights

Custom and retrofit packages available including

Waddell Cases and Keith Williams Cabinets

**New base and spot lights  
for individual specimens**



*De Natura*

[www.denatura.net](http://www.denatura.net)

P.O. Box 1273 | Gilbert, AZ 85299

602-370-0639

## Trimming and Specimen Preparation

*38 years experience  
making specimens look  
their very best*

Thumbnails to as large as I can lift  
Send digital photos for a free estimate

**LES PRESMYK**

Arizona Mineral Preparation Lab, LLC.

[www.denatura.net](http://www.denatura.net)

P.O. Box 1273 | Gilbert, AZ 85299

602-370-0639





# Reduce Environmental Impact

## Green Bench Practices Benefit the Budget



The green movement is exploding as the media focus attention on the environment and global warming, spurred in 2006 by Al Gore's film, *An Inconvenient Truth*. To many rockhounds and lapidary hobbyists, however, "green" has become synonymous with "inconvenient", as environmental activists have helped to close off collecting areas that produce the precious and semiprecious materials they cut and set into jewelry.

To allay the negative associations, let's define the terms "green" and "sustainable". The green movement interweaves environmental goals with a sense of personal and social responsibility. Sustainable practices use resources without depleting them or permanently damaging the environment that yields them. In short, the "green", or "eco", movement in jewelry is about showing respect to the earth and the workers who bring

us the precious metals and stones with which we work.

Another development gaining traction in the mining of precious materials is labeled as "fair trade" or "Fairmined". Fairmined is a third-party certification that can be obtained by small-scale artisanal gold mines in developing countries. To earn certification, mines must follow strict requirements for social development, environmental protection, safe labor conditions, and economic development.

Gems that are ethically sourced are referred to as fair trade. Tracing the supply chain of gemstones is more difficult, and no third-party certification systems currently exist to verify the gemstone supply chain. However, the same considerations apply to the development of gem-mining communities, as well as the treatment and working conditions of gem miners, stonecutters and polishers.

Small-scale jewelry makers and lapidary hobbyists may worry that the costs associated with sustainability and fair trade will negatively impact them through increased prices for metals and gems. There are, however, practices that are easy to employ and can save you money while they save the earth.

Specific environmentally responsible bench practices include the following:

**1. Capture and reclaim all precious metals.** Download tips for improving your returns from the Hoover & Strong Web site ([www.hooverandstrong.com](http://www.hooverandstrong.com)). These include separating metal scrap, installing a sink trap, capturing dust in floor mats or carpets, and vacuuming frequently with a dedicated vacuum.

Collect anything used in precious metal manufacturing in a special bin to be turned in for refining. Aprons, rags, buffs, brushes, emery paper, and polishing dust also may be refined. Jewelers can use a wet paper towel (made from recycled paper) to clean their hands before washing at the sink. Reuse the towel throughout the day to reduce waste. Collect the towels in the refining bin in order to capture particles that would usually be washed away.

The refiner assures us this practice is worth the effort, expense and resources, stating, "You would be surprised at how many small particles go into the sewer otherwise".

**2. Re-cut gems and re-cast metal from older jewelry.** America's jewelry boxes contain an incredible supply of precious metals. Everyone has broken, outdated, or rarely worn jewelry, much of which ends up in pawnshops and thrift shops, at estate sales, or on online auction sites. This metal could be brought back into the supply chain, reducing the need for mining. Hoover & Strong offers a formula and estimation chart to help jewelers calculate how much to offer for old jewelry.

Likewise, gemstones can be removed from their settings and reused in a new



America's jewelry boxes contain an incredible supply of precious metals that could be brought back into the supply chain, reducing the need for mining.



**Citric pickle solution is healthier both for the jeweler and for the environment than standard pickle solution is.**



**Many jewelers have switched to less-toxic alternatives like cadmium-free solders and fluoride-free fluxes.**

design or re-cut into more modern styles. Minor flaws in the stone can be removed by altering the style of the cut. Examine stones with a loupe to determine their quality and learn to tell real gems from imitations.

**3. Conserve energy, water and fuels.** Use compact fluorescent and standard fluorescent light bulbs. Fix drafts in your workshop to reduce heating and cooling bills. Turn machinery off when not in use.

Marc Choyt, president of Reflective Images and author of the free e-book *The Ethical Jewelry Handbook* (2009, reflective@cybermesa.com), recommends working with organizations that can help you compensate for the carbon you generate. He explains, "You can do this through a number of ways, from tree planting to purchasing carbon offsets."

Designer Toby Pomeroy, of Corvallis, Oregon, who pioneered the idea of using precious metals from reclaimed sources, exercises his option to purchase sustainably generated electricity from Pacific Power.

**4. Control water usage.** Never let water run when not in use. Consider keeping a wash bucket in the sink or near your bench instead of running water down the drain to wash each item. If you replace the solution in your ultrasonic cleaner frequently, implement a system with two units. Use the first for pieces straight from the buffer and the second for final cleaning. When the dirty water needs to be changed, replace it with the cleaner water from the second machine. Starting only one new bath

will save water and use fewer cleaning agents, said manufacturer Aron Suna to the *MJSA Journal*.

**5. Reduce toxics and chemical use.** Many jewelers have switched to cadmium-free solders and fluoride-free fluxes and are seeking other less toxic alternatives to traditional studio practices. Citric pickle solution, for example, is healthier for the jeweler and the environment than standard pickle solution. Though some jewelers report it works more slowly, others prefer it, especially for depleting the surface of alloys. Use the solution warm and increase the solution strength to suit your needs.

Jeweler, author and educator Charles Lewton-Brain says the simplest thing jewelers can do to lessen their environmental impact is "change practices to reduce chemical loads." His book *The Jewelry Workshop Safety Report* (1998, Brain Press) includes sample chemical inventory and chemical profile sheets, as well as a procedure evaluation form and a substitution checklist.

Lewton-Brain recommends analyzing all studio practices, implementing health and safety precautions, and substituting alternatives to reduce risks. He says jewelers should "avoid bombing, reduce cyanide use, and reduce or eliminate solvents." If solvents are necessary, he recommends ethyl, benzyl and isopropyl alcohols, as well as acetone, as the safest. "There is no such thing as nontoxic," Lewton-Brain says. "Toxicity is often dose dependent."

With all less toxic alternatives, be sure to read the Material Safety Data Sheets

(MSDS) and follow proper ventilation, safety and disposal procedures. Hazardous waste disposal procedures vary by region. Check with local government and sanitation agencies for information.

**6. Reduce and recycle packaging.** Reduce the size of your packaging containers, choose recycled packaging products, and ask your suppliers to do the same. Hoover & Strong encourages their customers to recycle their boxes by using them for shipping back scrap metal for refining.

Choyt's company saves money by reusing boxes, including FedEx boxes, and shredding paper for packing. "At first," he says, "we had some concern because we imagined that customers might not like to receive jewelry in a used box, so we had a stamp made that says in green ink 'All Shipping Products Are Recycled.'"

Reuse plastic peanuts and other nonrecyclable packing materials or take them to a retail mailing service such as Mailboxes Etc.

**7. Educate yourself and others.** Do everything you can to educate yourself on environmental and ethical issues associated with the jewelry industry, as well as the impact of your studio procedures. Use what you learn to educate your customers about ethical and sustainable values and practices.

As more people seek environmentally sustainable products, they will become more available and more affordable. "The eco movement in the jewelry industry is in its infancy but is growing at an astonishing rate," says Pomeroy. 💎



## The 3rd Annual Rock, Gem, & Mineral Show

# February 21st & 22nd, 2015

Las Cruces, New Mexico

## The Museum ROCKS!

Gem & Mineral Show

Saturday 9 am-5 pm & Sunday 10 am-5 pm

Tickets are \$5

A Gem, Mineral & Jewelry Showcase in the unique  
environment of the Farm and Ranch Heritage Museum!

Follow Us



on Face-

*Booths might still be available.*

*Hosted by:*

For more information call 575-522-1232 or visit

[www.LCMuseumRocks.com](http://www.LCMuseumRocks.com)



## Show Dates from page 32

shop. Free hourly door prizes.; contact: Yooy Nelson, (503) 252-8300; e-mail: [info@gemfaire.com](mailto:info@gemfaire.com); Web site: <http://www.gemfaire.com>

**FEB. 28-MAR. 01—ISSAQUAH, WASHINGTON:** 2015 Gem, Mineral, & Jewelry Show; East KingCo Rock Club, Pickering Barn, 1730 10 Avenue NW; Sat. 10-6, Sun. 10-5; Admission is FREE; contact: Robin Feiner, PO Box 2203, Redmond, WA, 98073; e-mail: [rfeiner@rocketmail.com](mailto:rfeiner@rocketmail.com)

## March 2015

**06-08—DEL MAR, CALIFORNIA:** Wholesale and retail show; Gem Faire Inc, Del Mar Fairgrounds, 2260 Jimmy Durante Blvd; Fri. Noon-6pm, Sat. 10am-6pm, Sun. 10am-5pm; Admission \$7, Children free (ages 0-11); Fine jewelry, precious & semi-precious gemstones, millions of beads, crystals, gold & silver, pearls, minerals & much more at manufacturer's prices. Exhibitors from around the world. Jewelry repair & cleaning while you shop. Free hourly door prizes.; contact: Yooy Nelson, (503) 252-8300; e-mail: [info@gemfaire.com](mailto:info@gemfaire.com); Web site: [HYPERLINK "http://www.gemfaire.com"](http://www.gemfaire.com)

**06-08—NEWARK, CALIFORNIA:** Show and sale; Mineral and Gem Society of Castro Valley, Newark Pavilion, 6430 Thornton Ave.; Fri. 10:00 am-6:00 pm, Sat. 10:00 am-6:00 pm, Sun. 10:00 am-5:00 pm; Admission \$6.00 3 day pass, Children <13 Free w/adult; 67th Annual Show & Sale. Over 40 dealers selling Jewelry, Gemstones, Minerals, Fossils, Beads, Faceted Stones, Books, Tools. Also Demos, Exhibits, Fluorescent Room, Kids Spinning Wheel, Geode Splitting, Door Prizes, Raffles, Live Auction. contact Michael Tice, 3837 Parish Ave., Fremont, CA 94536, Free parking. ; contact: Cathy Miller, 20948 A Corsair Blvd., Hayward, CA, 94545, (510) 887-9007; e-mail: [showchair@mgscv.org](mailto:showchair@mgscv.org); Web site: [HYPERLINK "http://www.mgscv.org"](http://www.mgscv.org) [www.mgscv.org](http://www.mgscv.org)

**07-08—Robstown, Texas:** Annual show; Gulf Coast Gem & Mineral Society, Richard M. Borchard Regional Fairgrounds, 1213 Terry Shamsie Blvd; Sat. 10:00 AM-6:00 PM, Sun. 10:00 AM-5:00 PM; Admission \$5.00 for a 2 day pass, Children 12 & under free with adults; Scouts in uniform free: hourly door prizes, grand prize drawing, raffle, touch table, mineral & gem identification, demonstrations, 20 + case exhibits, silent auction, kids wheel of rocks, 25 + dealers, fluorescent case, rocks, minerals, fossils, slabs, cabs, rough, gemstone jewelry, tools equipment, books, geodes. handmade jewelry, amber, agates, petrified wood, and much more. ; contact: Linda Simpson, 1302 Annapolis Dr, Corpus Christi, TX, 78415, (361) 877-5820; e-mail: [lsimp@swbell.net](mailto:lsimp@swbell.net); Web site: [HYPERLINK "http://www.gcgms.org"](http://www.gcgms.org) [www.gcgms.org](http://www.gcgms.org)

**07-08—ARCADIA, CALIFORNIA:** Annual show; Monrovia Rockhounds, Los Angeles Arboretum Botanic Gardens, 201 S. Baldwin Ave; Sat. 9-4:30, Sun. 9-4:30; Admission \$9, Seniors \$7, Students \$7, Children \$4; More than 15 dealers, beads, lapidary, jewelry, minerals, fossils, rocks, raffle, grab bags, treasure wheel, geodes.; contact: Jo Anna Ritchey, 224 Oaks Ave, Monrovia, CA, 91016, (626) 359-1624; e-mail: [joannaritchey@gmail.com](mailto:joannaritchey@gmail.com); Web site: [HYPERLINK "http://www.moroks.com"](http://www.moroks.com) [www.moroks.com](http://www.moroks.com)

**07-08—BIG SPRING, TEXAS:** Annual show; Big Spring Prospectors Club, Howard County Fair Barn, Big Spring Rodeo Grounds; Sat. 9:00 A.M-5:00 P.M,

*continued on page 58*

Patriot



# Jersey Instruments

[www.jerseyinstruments.com](http://www.jerseyinstruments.com)

## Jersey Instruments

805 Halsted Ct.  
Huntsville, AL 35803  
(256) 883-8988



Tom Thumb



# Tucson



# Gem Mall

**Fastest Growing Show in Tucson**

**January 31 thru February 13, 2015**

*~Wholesale Only~  
Tax License Required  
For Admission*

*Register Online for your  
Tucson Buyer Badges  
at [glwshows.com](http://glwshows.com)*

**Gem & Lapidary Wholesalers, Inc.**

**P.O. Box 98 Flora, MS 39071-0098 | Phone (601) 879-8832 | Fax (601) 879-3282**

**E-Mail [info@glwshows.com](mailto:info@glwshows.com) | Website [glwshows.com](http://glwshows.com)**



# ROCK & GEMKIDS

## Aegirine

Many minerals are named for the place in which they were first found; benitoite, for example, was found along California's San Benito River. Others are named for people: goethite honors Johan Wolfgang von Goethe, a German writer, statesman and scientist, while bobJonesite honors lifelong rockhound and Carnegie Mineralogical Award recipient Bob Jones.

Some minerals bear the names of gods. For instance, neptunite honors Neptune, the Roman god of the sea. The close look-alike mineral aegirine was also named for a sea god, but because it was discovered near the sea in Norway, it was named for Ægir, the sea god of Norse mythology. It was named in 1835 by priest and mineralogist Hans Morten Thrane Esmark.

Aegirine isn't all that colorful—many specimens are greenish-black—but its long, prismatic crystals make nice display pieces, especially when they are nestled in white matrix. Perfect crystals have pointy pyramids on top and are usually opaque, with a vitreous luster. Black specimens look like long, slender schorl (black tourmaline) crystals.

The greenish-black color may veer into brown or reddish-black, and thin edges may be translucent green. A fibrous greenish variety is known as acmite, and acmite is sometimes used as a synonym for aegirine. Although a dark mineral, aegirine leaves a pale yellowish-gray streak on a ceramic streak plate. Somewhat rare, it has no real uses other than as a collector specimen.

In addition to localities in Norway, aegirine has been found on Russia's Kola Peninsula, Narssârssuk in Greenland, the Canadian gemstone district of Mont Saint-Hilaire, Quebec, and, in the U.S., at Magnet Cove in Arkansas, home to many rare and unusual minerals.

—Jim Brace-Thompson



## Pearls

### Gems of Organic Origin

Gemstones come from minerals, which are inorganic. But several organic materials created from living organisms have been used for lapidary purposes and thus also fall into the category of gemstones, for instance, amber and jet (created by plants) and ivory, coral, and pearls (created by animals). Pearls have been valued by lapidary artists for 6,000 years. They rarely require processing other than gluing a bead cap or drilling a hole to insert a string.

A pearl is formed when a parasite or other object invades the shell of a mollusk. To protect itself, the mollusk covers the object with nacre ("mother of pearl"), the material lining the inside of its shell. Nacre is composed of calcium carbonate in the form of aragonite, along with a hornlike compound called conchiolin, and gives the pearl its iridescent sheen. Most natural pearls are irregular in shape.

Out of thousands of marine oysters or freshwater mussels, only one might produce a natural or wild pearl, so they are true rarities and command high prices, but scientists have discovered how to create pearls artificially. Beads or other objects are placed within living mollusks, which are returned to the water. These mollusks cover the foreign objects with layers of nacre, thus producing "farmed", or "cultured", pearls. Most pearls on today's market are cultured—if not glass, plastic, or enamel imitations.

Pearl quality is judged by its iridescence, luster, flawlessness, texture, shape, size and color, and whether the pearl is natural or cultured. The best pearls are natural with a metallic luster, perfectly round shape, and large size. How large? Well, the "Pearl of Lao Tzu" from the Philippines was produced by a giant clam. It lacks the iridescence of precious pearls, but at 14 pounds, it's the biggest one to date!

—Jim Brace-Thompson





## Montana Dinosaur Digs

Have you ever wanted to be a paleontologist? How exciting would it be to dig up dinosaur bones and prepare them for study? Guess what? You can find out by participating in a real fossil dig!

The removal of fossils from public lands is strictly prohibited, so the field of paleontology has been to the general population. It was only relatively recently that two research facilities in eastern Montana have invited nonprofessionals to take active part in their legitimate fossil-recovery operations. The remains of *Tyrannosaurus rex*, pachycephalosaurs, raptors, ankylosaurs, ceratopsians, hadrosaurs, ornithomimids and sauropods have been found in this state.

Working alongside professionals, you can excavate fossilized bones from the earth. The experts will teach you the techniques for carefully exposing the scientifically important artifacts and stabilizing them for transportation to the research facility. Study of these fossils adds greatly to the world's knowledge of dinosaurs, and sometimes, amateurs take part in making some important, new discoveries!

The Judith River Dinosaur Institute ([montanadinosaurdigs.com](http://montanadinosaurdigs.com)) came into being in 1993. In 2015, it will offer three six-day-long dig programs in July and August.

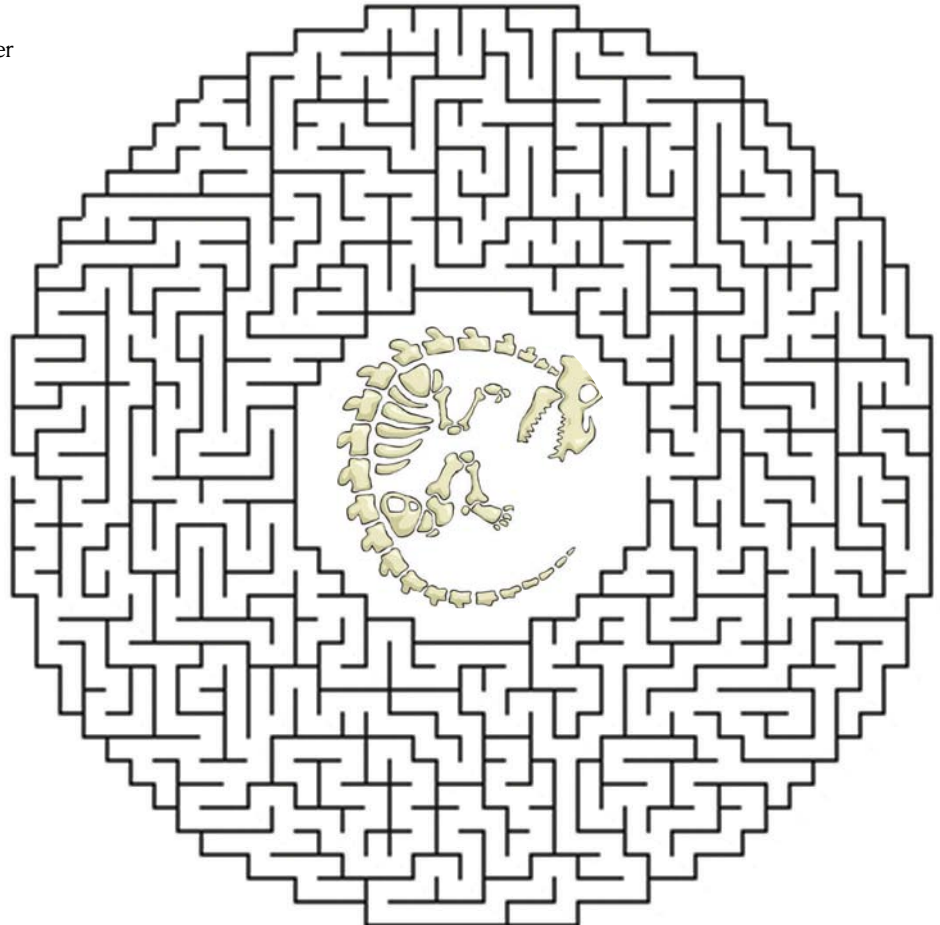
The PaleoWorld Research Foundation ([www.paleoworld.org](http://www.paleoworld.org)) was established in 2000. Participants can choose the number of days from June 1 through July 31 they want to take part.

No previous training or special educational background is required to take part in these digs—just a serious interest in the science of paleontology. Just think: You could be part of the next big dinosaur discovery!

—Lynn Varon

## Dig a Dino!

Use the paleontology tools to uncover the fossil at the center of the maze.





# Rock&Gem

S H O W C A S E

**GEM Center U.S.A. Inc.**  
 4100 Alameda Ave., El Paso, TX 79905  
 P 915-533-7153 F 915-532-0244  
 gemcenter@sbcglobal.net  
 www.gemsgedoeswholesale.com

**Tucson Gem Shows:**  
**Kino Gem & Mineral Show**  
 Jan. 30th - Feb. 15th 2015  
 Kino Sports Complex 2500 E. Ajo Way, Tucson AZ 85703 (Outside Tent #15)  
**Tucson Gem and Mineral Show**  
 Feb 12 - Feb. 15th 2015  
 Tucson Convention Center, 260 South Church Ave., Tucson AZ 85701 (Space 1627)

**Geode Cracking!**  
**High Quality Geodes**  
**Direct from the Mine!**



**Trancas Geodes**  
**Brazilian Agate**



Fire Agate Turquoise Metal Matrix Ocean Jasper Coyamito Agate Variscite Black Garnet

**THE MANY FACES OF MONTANA AGATE COLLECTIONS**

**A spectacular new book featuring nearly 400 COLOR PHOTOGRAPHS of beautiful & unique Montana Agates.**

**The Rainbow Iris Agate Phenomenon**

**OVER 150 PAGES!**

By Tom Harmon

Tom Harmon grew up on the Yellowstone River in Eastern Montana, and developed a love for the river and especially the beautiful agates there. It's one of the few places in the world where agates are found in alluvial gravels that cover such a huge area. This opportunity gave Tom a possibility for a life's work in gathering and working with Montana Agate.

This book is the author's third book on Montana Agate. The first was 'The River Runs North: A Story of Montana Agate' in 2000. He also co-authored 'The How-To's of Cabbing and Carving: Montana Agate and Other Chalcedony's' with son Jim Harmon, in 2005.

Order ONLINE at: [www.harmons.net](http://www.harmons.net) or [www.godspaintingsinstone.com](http://www.godspaintingsinstone.com)

Books are also available at:  
**THE AGATE STOP**  
 Savage, Montana  
 406-776-2373  
 The official museum of the Montana Moss Agate!

MasterCard VISA

Only **\$59** ORDER TODAY!

HARMON'S AGATE & SILVER, INC. • BOX 21 - CRANE, MT 59217 • 406-798-3624

**JEWELRY CLASSES**

**iV INNOVATIVE VISIONS**  
**INNOVATIVEVISIONS.ORG**  
 Tucson, Arizona • February 3-8, 2015

**SIGN UP NOW!**



**ARTIST JEFF FULKERSON**

**GBM** **Otto Frei** **Jewelry Artist Supply** **JOOLTOOL**  
**PJ Tool** **artclayworld** **Wubbers** **DIAMOND PACIFIC**  
 Jewelry & Craft USA ... Made to Make Jewelry

## Amateur Geologist

*Supplies for the recreational geologist and rockhound*



Books - 800 titles - most at 30% off

Estwing rock hammers and tools

Loupes - BelOMO & Bausch & Lomb

Geology maps & charts  
 Educational rock & mineral collections

Hardness pick sets

Vests with pockets galore

Ultraviolet lights

Rock tumblers

Rockhound stuff for kids

Novelties

Discounted internet prices!!!

[www.amateurgeologist.com](http://www.amateurgeologist.com)



# ALL NEW ROCK WRAPS

THE EASIEST WAY TO TURN ANY ROCK OR  
OBJECT INTO A STERLING SILVER PENDANT

IN LESS THAN 30 SECONDS,  
AND UNDER \$6.00 EACH!



## YOU CAN WRAP ANYTHING!

Calibrated Cabochons, Nuggets, Crystal and Coral Clusters, Individual Crystal Points,  
Any Tumbled Stone, Rough Rock Pieces and Chips and even Marbles!  
All you need to turn any rock or stone into a pendant is a needle nose pliers!

### INTRODUCTORY OFFER

10 FOR \$50.00, TWO EACH OF 5 SIZES RW7, RW6, RW5, RW4 AND RW3. 100 FOR \$400.00.

**ORDER NOW! 303-517-1068**

[HTTP://ROCKWRAPS.HOMESTEAD.COM/INDEX.HTML](http://rockwraps.homestead.com/index.html)

# JADE!!!

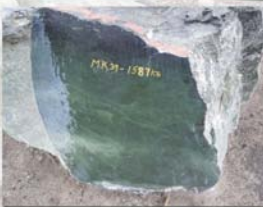
HIGHEST QUALITY NEPHRITE JADE FROM B.C. CANADA



BELOW  
WHOLESALE  
**\$10 LB**  
1 TON + \$8.50 LB.

THERE IS NO HIGHER QUALITY JADE  
FOR EVEN CLOSE TO OUR PRICES!

**SATISFACTION  
GUARANTEED!**



**CONTACT TOM AT**

**208-351-5576 • WWW.JADE-SILVER-GOLD.COM**

Are You Interested In  
Learning How To Carve  
Gemstones For Your Jewelry?



This new book and DVD  
by Dick Friesen  
will get you started.



Available From Amazon  
Search Under:  
Dick Friesen  
or

Beginning Gemstone and Jewelry Carving

**Rock&Gem**  
SHOWCASE

## Astounding Selection of Minerals & Fossils from Around the Globe **MINERS GEMS**



Experts in Geology,  
Gemology & Paleontology

World Famous Gold Rush  
Rock Shop & Mining Museum

Daily Mineral Panning  
and Geode Cutting

Educational Programs  
Available

In Old Town San Diego  
State Historic Park

2616 San Diego Avenue  
San Diego CA 92110

619-688-1178

[minersgemsandminerals@cox.net](mailto:minersgemsandminerals@cox.net)  
[www.minersgemsandminerals.com](http://www.minersgemsandminerals.com)



# HAVING TROUBLE SOLDERING YOUR SILVER PIECES?

CALL FOR FREE HELP AND ANSWERS:  
**303-517-1068**

**DON NORRIS,**  
INTERNATIONALLY RENOWNED SILVERSMITHING TEACHER,  
WILL ANSWER YOUR QUESTIONS.

## THREE KINDS OF CLASSES:

**In Person:** I will schedule a class almost anywhere in the USA if you can organize four people or more.

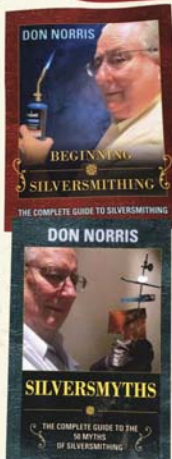
**Books of CDs and Paperback Books:** My new paperback book, "Silversmiths, the 50 Myths of Silversmithing" is ready to mail out.

### Videos on DVDs.

Order now and receive over 80 hours of Silversmithing video instruction. They cover torches, my Beginning Silversmithing Class, making bezels, pendants, rings, 10 different ring bands, over 10 different balls, channel work, chip inlay, all safety concerns, 30 principles of designing jewelry for a profit, flex shaft and Dremel Tool attachments, many ways to texture and patina metal, how to make large bracelets, ear rings, over 20 simple, easy, quick and profitable projects and much more. Visit [learnsilver.com](http://learnsilver.com) for a list of the 75 one hour classes on video that are included in this package.

**Rock and Gem Reader's Special: \$300.00. but wait, don't buy it yet, there's more!** Order now and Don will send you seven books on a CD, Beginning Silversmithing, Advanced Silversmithing, three wire sculpture classes, Lapidary on a Budget, and Bean and Pine Needle Casting.

But wait, he will also send you his "Lost Wax Casting" book on another CD for free!



**JUST CALL HIM WITH YOUR ORDER 303-517-1068**

**DON NORRIS, [LEARN SILVER.COM](http://LEARN SILVER.COM), [DNORRIS@FRII.COM](mailto:DNORRIS@FRII.COM)**

# Ammolite



## Snuff Bottles

**Bill Egleston**  
509 RG Brentwood Rd.,  
Marshalltown, IA 50158  
(800) 798-4579

[egleston64@mchsi.com](mailto:egleston64@mchsi.com)



**We sell high-quality material  
at great prices with FREE SHIPPING**  
[www.mexicanroseagates.com](http://www.mexicanroseagates.com)

Much of the material we have collected  
is from newly discovered areas



**BELLA'S**  
Stone Pendants



The most beautiful handmade stone pendants (wrapped in silver or copper) on the Internet! We connected the energy of the rocks with unique style and the best prices you'll ever find!

[www.bellasstonependants.com](http://www.bellasstonependants.com)  
Phones: 602 400 8457 | 480 427 6462  
E-mail: [bellasstonependants@gmail.com](mailto:bellasstonependants@gmail.com)

How many **buckets** do you have to  
haul before you buy one of these?

[www.brolltools.com](http://www.brolltools.com)



Broll Pro now includes the  
Broll Bag to haul even more

**Broll**



# JANUARY SPECIAL: COOBER PEDY OPAL PARCEL FROM SOUTHERN CROSS

Purchased during my May 2014 opal buying trip to Australia. Nice bright blue/green/red play-of-color in a classic white base Coober Pedy opal. \$175.00 per ounce or 2 ounces \$295.00. For more photos of the parcel please visit our website: [www.villagesmithy.com](http://www.villagesmithy.com). And if you're interested in a bit of opal adventure, don't miss the trip report for our May 2014 trip to Coober Pedy, also on our website.



CPSCROSS14-1 AND CPSCROSS14-2

## THE VILLAGE SMITHY OPALS, INC.

Proprietors Steve & Darlene

P.O. Box 21704, Billings, MT 59104-1704 • Phone: 406-651-4947 Mobile: 406-208-2577

E-mail: [vsmithy@bresnan.net](mailto:vsmithy@bresnan.net) • Website: [www.villagesmithyopals.com](http://www.villagesmithyopals.com)



# TYSON WELLS

*Arizona's Largest Winter Attraction!*



## TYSON WELLS

### Rock-Gem-Mineral Show

Quartzsite, Arizona

**Jan. 2 – 11, 2015**

**A 10-DAY SHOW**

- Gems • Rocks • Minerals • Jewelry •
- Silver & Goldsmithing • Faceting •
- Precious Metals •

**Lapidary Tools, Equipment & Supplies**

**FREE ADMISSION • FREE PARKING**

LOCATION AND DETAILS: S.W. Corner of I-10 Freeway and Highway 95, Quartzsite, Arizona, home of the largest show of its kind. • Takes days to see it all. • A buyers' and sellers' market of the world. • Smooth, fine graveled, dust controlled, packed surface for selling, parking and camping in the beautiful desert setting of Arizona's La Posa Valley. • Live on your show spaces or in our on-premises no-hookup campground with water and dump station. • Honey wagon available. • Easy access in and out of show. • Over 850 selling spaces on 25 acres. • This is a must see event.

## TYSON WELLS 35<sup>th</sup> ANNUAL

### SELL-A-RAMA

**Rock-Gems-Arts-Crafts Show**

**JAN. 16 – 25, 2015, A 10-DAY SHOW**

**A 25-ACRE OUTDOOR SPECTACULAR**

An Unbelievable Variety Displayed on 2.2 Miles of Aisle Frontage

- Gems • Rocks • Minerals • Arts •
- Crafts • Hobbies • Jewelry •
- Silver & Goldsmithing • Faceting •
- Precious Metals • Antiques • Coins •

## TYSON WELLS

P.O. Box 60, Quartzsite, AZ 85346

Show Office Phone: (928) 927-6364 • For R.V. Office: (928) 927-6365

E-mail: [tysonwells@tds.net](mailto:tysonwells@tds.net)

[www.tysonwells.com](http://www.tysonwells.com)



# MILS®

Minnesota Lapidary Supply  
YOUR GO TO SOURCE FOR  
**AMERICAN MADE**  
**SILICON CARBIDE**  
**LAPIDARY QUALITY**  
**GRINDING WHEELS**

WHEEL SIZE (Diameter X Thickness)	PRICE EACH	
	SILICON CARBIDE	
	100 Mesh	220 Mesh
6" X 1" Black	\$24.65	\$28.35
6" X 1" Green	\$29.10	\$32.80
8" X 1½" Black	\$44.45	\$51.05
8" X 1½" Green	\$52.40	\$59.00

All wheels with 1" arbor hole, includes telescopic bushings to industry standards.

Note: Dealer inquiries welcomed.

Minnesota Lapidary Supply  
201 N. Rum River Drive

Princeton, MN 55371  
Ph/Fax: (763)-631-0405  
e-mail: [sales@lapidarysupplies.com](mailto:sales@lapidarysupplies.com)

Our Hours are:

Sun. & Mon. --- Closed

Tues. thru Fri. --- 9:00 a.m. to 5:00 p.m. CST

Sat. --- 9:00 a.m. to 4:00 p.m. CST

## ROCK WAREHOUSE

YOUR ONLY SOURCE FOR  
ROCK & RELATED PRODUCTS  
**561-391-2636**

BRAZILIAN AGATE BOOKENDS & END CUTS  
ROUGH CALCITES - JASPER - OBSIDIAN - PETRIFIED WOOD  
MEXICAN GEODES & MINER ORE CARTS  
OBSIDIAN & ONYX ANIMALS & OTHER FIGURES  
OBSIDIAN TURTLES WITH INLAID ROCK SHELLS  
MESSAGE STONES - CHAKRA PACKS - PYRAMIDS - OBELISKS  
HOME & GARDEN DECOR - SCULPTURES - ONYX FRUIT SETS  
JEWELRY & BEADS: CAT'S EYE - CRISTAL  
MURANO & MORE ROCK SPECIMENS & FOSSILS

**ROCKWAREHOUSE@AOL.COM**

Send us your email address for our mailing list or call for more information.

**TAMPA AREA**

1 Skid  
Minimum Order  
Can be combined  
material if necessary.

Black Obsidian  
(Good Quality)  
\$.57 per Lb

Orange Calcite  
\$.63 per Lb

White Calcite  
\$.50 per Lb

Synthetic Block  
\$3.90 per Lb

**SPECIAL PRICES**  
for  
**Wholesale Buyers**



# WHAT TO CUT

by Scott Empey

## Lavic Siding Jasper

The colorful jaspers from Lavic Siding, in California's Mojave Desert, have been a staple of lapidaries for decades. There material in a wide variety of colors and patterns is still found there; the jasper can be banded, brecciated or solid, with the most interesting pieces having a mix of jasper and agate. Sometimes, there are small fortification patterns and vugs of sparkling druze in between.

It is found in a multitude of colors, predominately red, orange, yellow and tan. The agate sections found between the jasper can be clear, white or, sometimes, a vivid blue. At their best, the pieces with the blue agate have the same colors as the highly prized plume agates found in Wingate Pass, Death Valley, to the north. The best pieces I have cut have had red, yellow and orange brecciated sections, with bright-blue agate running throughout and a few druze vugs thrown in for a little sparkle.

Lavic Siding is an old, long-abandoned railway stop on the Atchison, Topeka & Santa Fe railroad, which was immortalized in the song of the same name. As a collecting destination, it is the rockhounding equivalent of going fishing in a trout pond: success is guaranteed. The jasper is found as float, so this is likely an old alluvial deposit that washed down from the South Cady Mountains. The ground is just covered with various types of jasper and jasp-agate as far as the eye can see. It's a great place to take first-timers and kids to make sure that no one ends the day without a big bucket of colorful rocks to take home. Much of the material these days is on the smaller side, around 6 inches across or smaller, but apparently in earlier times the pieces were quite large. I have some from old collections that are football-size or larger.

There are a lot of different varieties, each with its own personality, but for cutting material there are a few that I particularly like: the red, orange and yellow with the blue agate; a red, brecciated type with darker red between the sections that is dramatic and beautiful; and a very good-looking tan, brecciated material in which the jasper is laid down in sort of long, rectangular patterns, with agate in between.

Much of the material has dry, porous sections between the jasper, so be on the lookout for this when selecting rough. A lot



of material is available on various Internet sites, so there is a lot to choose from. Try to be selective and look for solid pieces to use for cabbing; conchoidal fracturing generally indicates a solid piece with a high silica content that will take a nice, glossy polish.

There is so much variety in Lavic jasper that you could easily cut a whole batch of interesting cabs, each with different colors and patterns. ♦

Scott Empey, owner of Gerard Scott Designs, creates hand-cut gemstones, designer jewelry, and props for the motion picture industry. His Web site is [www.gerardscottdesigns.com](http://www.gerardscottdesigns.com).





# TYSON WELLS

*Arizona's Largest Winter Attraction!*



## TYSON WELLS

### Rock-Gem-Mineral Show

Quartzsite, Arizona

**Jan. 2 – 11, 2015**

**A 10-DAY SHOW**

- Gems • Rocks • Minerals • Jewelry •
- Silver & Goldsmithing • Faceting •
- Precious Metals •

**Lapidary Tools, Equipment & Supplies**

#### FREE ADMISSION • FREE PARKING

LOCATION AND DETAILS: S.W. Corner of I-10 Freeway and Highway 95, Quartzsite, Arizona, home of the largest show of its kind. • Takes days to see it all. • A buyers' and sellers' market of the world. • Smooth, fine graveled, dust controlled, packed surface for selling, parking and camping in the beautiful desert setting of Arizona's La Posa Valley. • Live on your show spaces or in our on-premises no-hookup campground with water and dump station. • Honey wagon available. • Easy access in and out of show. • Over 850 selling spaces on 25 acres. • This is a must see event.

## TYSON WELLS 35<sup>th</sup> ANNUAL

### SELL-A-RAMA

**Rock-Gems-Arts-Crafts Show**

**JAN. 16 – 25, 2015, A 10-DAY SHOW**

**A 25-ACRE OUTDOOR SPECTACULAR**

An Unbelievable Variety Displayed on 2.2 Miles of Aisle Frontage

- Gems • Rocks • Minerals • Arts •
- Crafts • Hobbies • Jewelry •
- Silver & Goldsmithing • Faceting •
- Precious Metals • Antiques • Coins •

## TYSON WELLS

P.O. Box 60, Quartzsite, AZ 85346

Show Office Phone: (928) 927-6364 • For R.V. Office: (928) 927-6365

E-mail: [tysonwells@tds.net](mailto:tysonwells@tds.net)

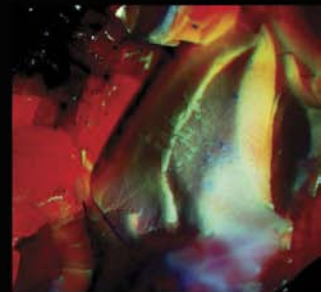
[www.tysonwells.com](http://www.tysonwells.com)

“ I have been a rock and geology enthusiast for 25 years, harvesting and micro mounting thousands of specimens from mines in southern Arizona.

Recently I began photographing my vast collection using a microscope, which brought forth a whole new world of shapes and colors I had never known existed.

It is my mission to bring that beauty to light and share it with all of you. ”

– Reuben Birkholz, founder of View Nature's Hidden Wonders



**[viewnatureshiddenwonders.com](http://viewnatureshiddenwonders.com)**

Based in Cottonwood, Arizona • (928) 300-4346



# The FLUORESCENT Mineral Society

Uniting and  
Educating  
Collectors  
Since 1971

Story by Conrad North,  
Albert Liebetrau and Jim Horste

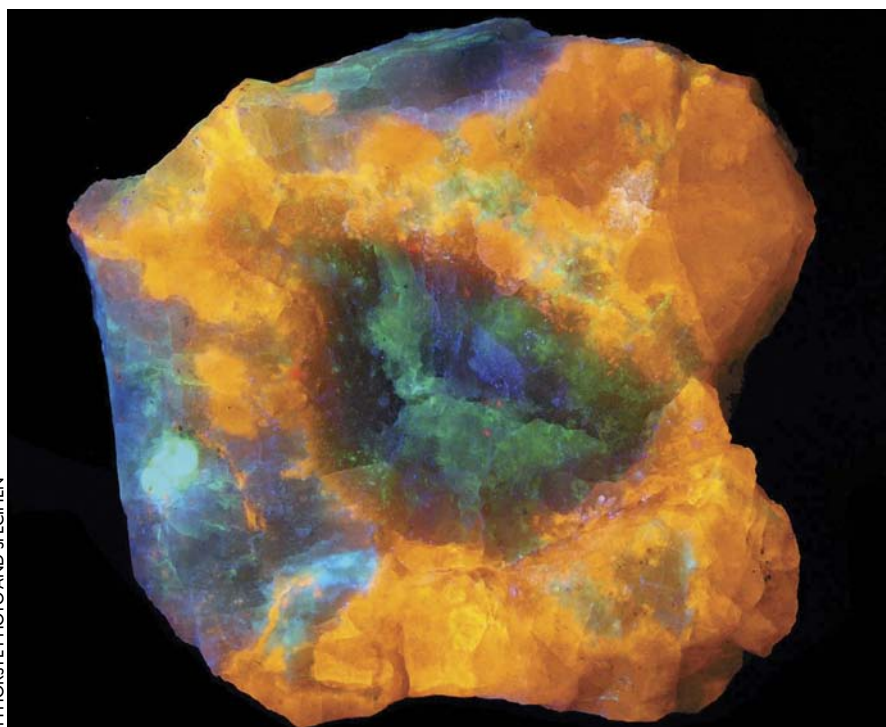
**T**he brilliant green response of a Sterling Hill, New Jersey, willemite specimen under an ultraviolet (UV) lamp, the red flash of a calcite specimen as it is removed quickly from UV light, the changing color response of calcite from Terlingua, Texas, under different wavelengths of UV light: For typical rockhounds, these are just interesting side-lights (pun intended) to their hobby. Many mineral collectors around the world, however, make this phenomenon, called fluorescence, the cornerstone of their collections.

JIM HORSTE PHOTO AND SPECIMEN



This sample of smithsonite from the El Refugio mine in Choix (Sinaloa), Mexico, shows both red and pink fluorescence under shortwave UV radiation.

JIM HORSTE PHOTO AND SPECIMEN



In this colorful specimen is from the Tunulliarfik Fjord in Greenland, sodalite glows orange under shortwave UV light. The blue and green fluorescing minerals are unidentified.

The first report of the phenomenon of phosphors (fluorescence) is generally attributed to Roman historian Titus Livius Patavinus (approximately 59 BCE-17 CE), known in today's world as "Livy", who describes the celebrants of Bacchus as having worn "fire in their hair". This was believed to have been a reference to some form of phosphor used by the Bacchants that caused their hair to glow. The first documented reference to fluorescence was made by Nicolas Monardes in 1565, when he described a "peculiar blue tinge" of the water infused from the wood of a small Mexican tree (coatli).

As the study of fluorescence grew, proportionately to the understanding of light, scientists expanded their theories of fluorescence. In 1845, Sir John Herchel termed the phenomenon "epipolic dispersion" during his experiments with quinine sulfate solutions. In 1852, G.G. Stokes formulated his own theories concerning fluorescence in his lengthy article "On the Change of Refrangibility of Light" and stated his dislike of Herchel's term epipolic dispersion for the phenomenon. As an alternative, he coined the word "fluorescence", which we still use today, from the words "fluorspar" (a commonly used mining term for fluorite) and "opalescence".

The study of fluorescence was long confined to the laboratory because of the need for special lights and power sources for them. But UV lighting technology has improved dramatically in recent years, and as prices came down, the equipment became easily accessible to the general public. UV lights have moved out of the laboratory and into people's darkened family rooms or basements, and into the field, thus allowing those with an interest to learn more about these odd rocks.

The interest in fluorescing rocks initially developed hand in hand with the mining industry. The ores associated with many valuable minerals, such as tungsten and uranium, were found to fluoresce, so UV lights were widely used in prospecting for these minerals, particularly during World War II and for some years following. Over time, people began to wonder what other materials fluoresced, so from its relative novelty in the 1960s, the study and use of fluorescence went "mainstream". Today, the analysis of fluorescent properties is a significant field of study that provides inroads to discoveries in biotechnology, medicine, life sciences, mineralogy, gemology, security, and numerous other fields.

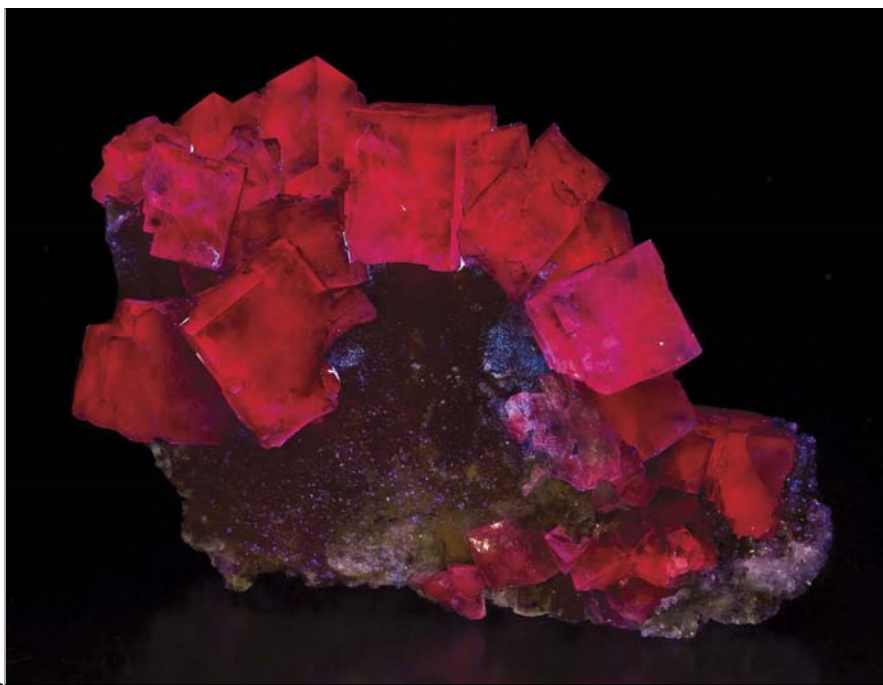
Of particular interest to fluorescent mineral enthusiasts was the discovery that approximately 15% of all rocks fluoresce, and a new group of enthusiasts went afield in search of that 15%. Equipped with today's UV lights, a little knowledge, and a bunch of batteries, these "fluoresophiles" have "gone mobile". During the daylight hours, they crawl

JOE BUDD PHOTO/ARKENSTONE SPECIMEN

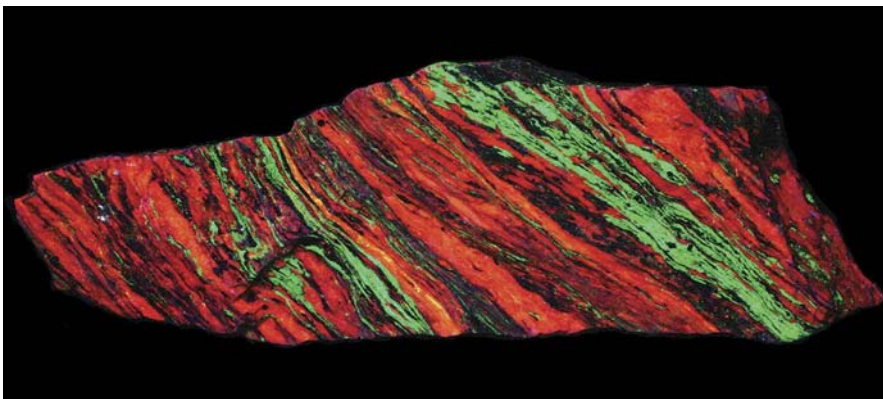


In daylight, fluorite from the Ojuela mine in Mapimi (Durango), Mexico, is clear with a light blue tint (above), but they exhibit a pleasing red color under longwave radiation that is quite uncommon (below).

JOE BUDD PHOTO/ARKENSTONE SPECIMEN



JIM HORSTE PHOTO AND SPECIMEN



This sample of smithsonite from the El Refugio mine in Choix (Sinaloa), Mexico, shows both red and pink fluorescence under shortwave UV radiation.



## Shows of Integrity

2015

Laughlin, Nevada  
Gem, Mineral, Jewelry  
& Bead Show

**JANUARY 15-22, 2015**  
Edgewater Colorado Belle  
E-Center

2100 S. Casino Dr  
Laughlin, NV

**Free to the Public**

Door Prize Drawings  
Investments For  
Your Future

GOLD	MINERALS
SILVER	CARVINGS
FINE JEWELRY	RINGS
BEADS	EARRINGS
FOSSIL	DIAMONDS
AMBER	EMERALD
CABOCHONS	NECKLACES
BRACELETS	WATCHES
CHARMS	PEARL

Terry James - Shows of Integrity  
18362 S Hwy 78, Leonard, TX 75452

E-Mail: [info@showsofintegrity.com](mailto:info@showsofintegrity.com)

[www.showsofintegrity.com](http://www.showsofintegrity.com)

## METEORITES

BEAUTIFUL GEMS FROM SPACE

Museum-Quality collectors' display and study specimens. Meteorite jewelry, books, collecting kits, unique gift items. Authenticity guaranteed.

### The Universe Collection

P.O. Box 3726-R

New Haven, CT 06525-0726

203 393-3395

203 393-2457 fax

[www.universecollection.com](http://www.universecollection.com)

### Color Catalog

\$3 USA, Canada and Mexico

\$6 Foreign

Refundable with order

VISA • MC • AMEX

## DISPLAY STANDS

### Free Catalog

For Eggs, Geodes, Fossils, Meteorites, Spheres, Shells, Slabs, Rocks and more. BUY direct from the manufacturer.

### Sylmar Displays

P.O. Box 3726-R

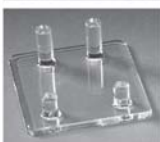
New Haven, CT 06525-0726

203 393-1059

203 393-2457 fax

[www.sylmardisplays.com](http://www.sylmardisplays.com)

Wholesale Catalog with Resale Number



## The FLUORESCENT Mineral Society from page 47



MARK MAUTHNER PHOTO/AL AND SUE LIEBETRAU SPECIMEN

In this magnetite-apatite specimen from Iron Mountain, Iron County, Utah, the embedded apatite crystals give off a plum color under midwave UV, while the magnetite does not fluoresce.

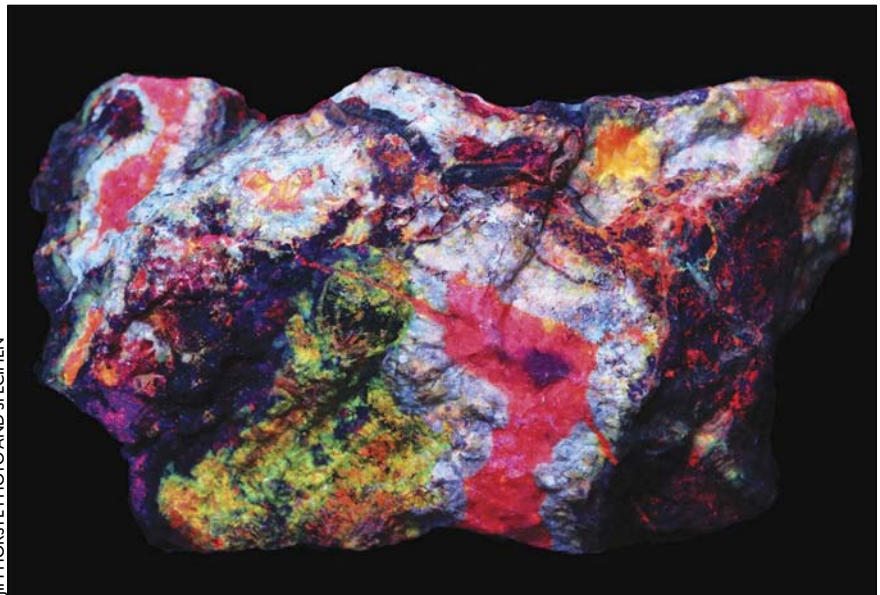
around under tarps, using their lamps to seek out those interesting, glowing rocks, while onlookers roll their eyes in wonder at these strange "turtle people".

### THE FLUORESCENT MINERAL SOCIETY

As the number of people interested in fluorescent minerals grew, so did interest in the creation of an organization that allowed fluorescent mineral hobbyists to identify each other and to share UV knowledge, photos of fluorescent minerals, collecting locations, and even the rocks themselves. Under the leadership of Don Newsome, who ultimately became the society's first president, notices were placed

in national mineral magazines to identify interested individuals. A core group was identified, and on Feb. 23, 1971, 11 fluorescent mineral enthusiasts gathered for the first meeting of the Fluorescent Mineral Society (FMS). During its first year, officers and board members were elected, a constitution was drafted, and names for the society's newsletter and journal were finalized. It was a busy year for the fledgling organization.

The FMS has grown from 48 charter members at the end of its first year to an international organization with nine chapters and a worldwide membership of nearly 400. Members range from beginning collectors to advanced researchers of fluores-



JIM HORSTE PHOTO AND SPECIMEN

Material from the Puttapa Zinc mine in South Australia responds to shortwave UV with a variety of intense colors: calcite fluoresces red, aragonite is white, and all other colors are attributed to willemite.

cence and fluorescent phenomena. The society includes among its members some of the most recognized geologists and academics in the field.

### THE FMS MISSION

With the stated mission of bringing together people who are interested in fluorescent minerals and promoting the hobby of fluorescent mineral collecting, the FMS promotes fellowship, collecting, and educational activities, and supports research that increases basic knowledge of fluorescence and fluorescent minerals. The mechanisms include publications, meetings, displays and collecting.

The society provides support for museums' fluorescent displays, advising on such matters as lighting, display methodology, and selection of display minerals. It also provides financial support to the Thomas S. Warren Museum of Fluorescence, which is located at the world-famous Sterling Hill mine in Ogdensburg, New Jersey.

The Warren Museum was designated the official museum of the Fluorescent Mineral Society because of its preeminence as a museum of fluorescence. The Museum was founded to serve as an educational facility for teachers of science and technology and as a tourist destination for students and collectors of fluorescent minerals. The FMS is proud to support that mission.

As the FMS grew and expanded internationally, it became clear that effective communication must be the cornerstone on which the success of all organizational activities was based. As the world increasingly relies on Web-based forms of communication, the FMS moved to embrace these new technologies. Toward that end, communication has become a priority in recent years and the FMS is actively upgrading ITS existing means of communication.

The Society supports a Web site, conducts monthly board meetings via the Internet, and maintains two Facebook pages. One, Fluorescent Mineral Society, is intended for the distribution of general information about the FMS and its activities. A second, FMS Fluorescent Minerals, supports a group of more than 400 members and allows anyone to interact with other fluorescophiles, post information on fluorescence, share photos, make mineral identification inquiries, and learn about other aspects of the hobby.

The society has recently used existing Internet services to increase communication and connectivity in the form of shared meetings. The Northeast chapter (see below), for example, has had "live" guest speakers from as far away as California and the United Kingdom at recent symposia. For upcoming symposia, connections are planned that will enable chapter members to participate live from selected locations anywhere in the FMS membership world.

## GY ROC® THE ULTIMATE IN JEWELRY FINISHING AND LAPIDARY EQUIPMENT & SUPPLIES

### PREFORMER 8" and 10" TRIM SAW



Unique Design  
Cuts Quickly and Accurately

**WRITE FOR  
FREE LITERATURE  
AND LOCATION  
OF YOUR  
NEAREST DEALER**

Dealerships And  
Distributorships  
Available

### VIBRAHONE



Available in 3 Sizes  
2.5 lbs.-10 lbs-40 lbs  
Produces Unequaled Results  
For Grinding And Polishing  
Stones And Finishing Jewelry

### CABBER



Easy To Use  
Forms Precision Domes  
For The Professional  
And Amateur.

We Have Moved!

**TAGIT®**

Manufactured by  
P.O. Box 1534, San Juan Capistrano, CA 92675  
(949) 498-8337 (949) 496-7742 Fax: (949) 498-8177



### Diamond



## Soft Wheels

### Premium Quality

Lasts upto 4 times longer than Imported Wheels

Dia	Width	Price
4"	1.250"	43.95
6"	1.500"	45.95
8"	2.000"	69.95



Made in USA

Grit Sizes  
60 to 200,000

## Best Prices & Quality

Johnson Brothers Lapidary Prices & specifications subject to change without notice  
Ph: 714-771-7007 - Email: sales@jbfc.com Web: [www.JBFC.com](http://www.JBFC.com)

**SEE US IN TUCSON AT ELECTRIC PARK BOOTH # OS-B4**

## "The Original" SPENCER OPAL MINES

Located in Spencer, ID at North end of Opal Ave.

Mini Mine open 9:00 am to 5:00 pm during the summer.

Bring your own tools, eye protection required and no open toed shoes.

— [www.spenceropalmines.com](http://www.spenceropalmines.com) —

**SHOW  
DATES:**

**THE ARIZONA FLAGG SHOW**  
(at Mesa community college)

**QUARTZITE AZ  
TUCSON AZ  
THE VENTURA SHOW**

**JANUARY 9-11**

**JANUARY 21-25  
JANUARY 29- FEBRUARY 19  
MARCH 7-8**

**Summer Contact:**  
27 Opal Ave.,  
Spencer, ID 83446  
(208) 374-5476

**Winter Contact:**  
P.O. Box 521  
Salome, AZ 85348  
(928) 859-3752



# CLOSEOUT

## Faceted & Cabochon fine quality gems at liquidation prices!

**CEYLON SAPPHIRE**, pastel color, blue, pink, green,  
2.50 - 2.75 mm princess 3 pc for \$8.00



**RUBY**, Burma, nice color,  
2 mm round, 5 pc for \$3.50

**BLACK SPINEL**, (black diamond subst.), fine cut,  
2 mm round brilliant, \$0.95 each

**GARNET**, red, fine cut,  
3.5 mm round 10 pcs for \$7.50

**MEXICAN OPAL**, fine cut, orange,  
4x6 mm oval \$3.00 each



**SILVER TOPAZ**, fine cut,  
3 mm round brilliant cut, \$0.75 each,  
6 mm round, \$3.60 each

**TOURMALINE**, cabochon, pink, round,  
4 mm \$3.50 each, round, 5 mm \$5.40 each.



**BURMA JADE & MAW SIT SIT**

**ROUGH Huge selection!**

**Gemstone Carvings**

**FACETING AND CARVING SERVICES**

VISA, MC, AMEX, CHECKS, Money Orders are welcome.  
S&H \$5.00 USA, 7.25% sale tax for CA residents  
without valid sale permit, free price list available.

**VR GEM CUTTERS**

PO Box 1263, Thousand Oaks, CA 91358

1 800 212 2278 Email: vrgems@msn.com

Visit us at

**www.midlandgems.com**

## ROCK PICK

A one piece solid steel construction  
rock hammer with  
a rubber grip  
handle. Both are  
11" overall in length.  
Fully polished.  
Chisel Pick is 1-1/4"  
wide. Shipping weight 2.2 lbs.



Stock No.	Weight Size	Style	Each	+4 Each
7-0357	30 oz.	Chisel Tip	\$19.95	\$16.95
7-0358	24 oz.	Pointed Tip	19.95	16.95



**Kingsley North, Inc.**

P.O. Box 216 • 910 Brown St  
Norway, Michigan 49870

Phone (800)338-9280 Fax (906)563-7143

sales@kingsleynorth.com

www.kingsleynorth.com

Keep up with

**BREAKING NEWS**

in Rockhounding between issues of

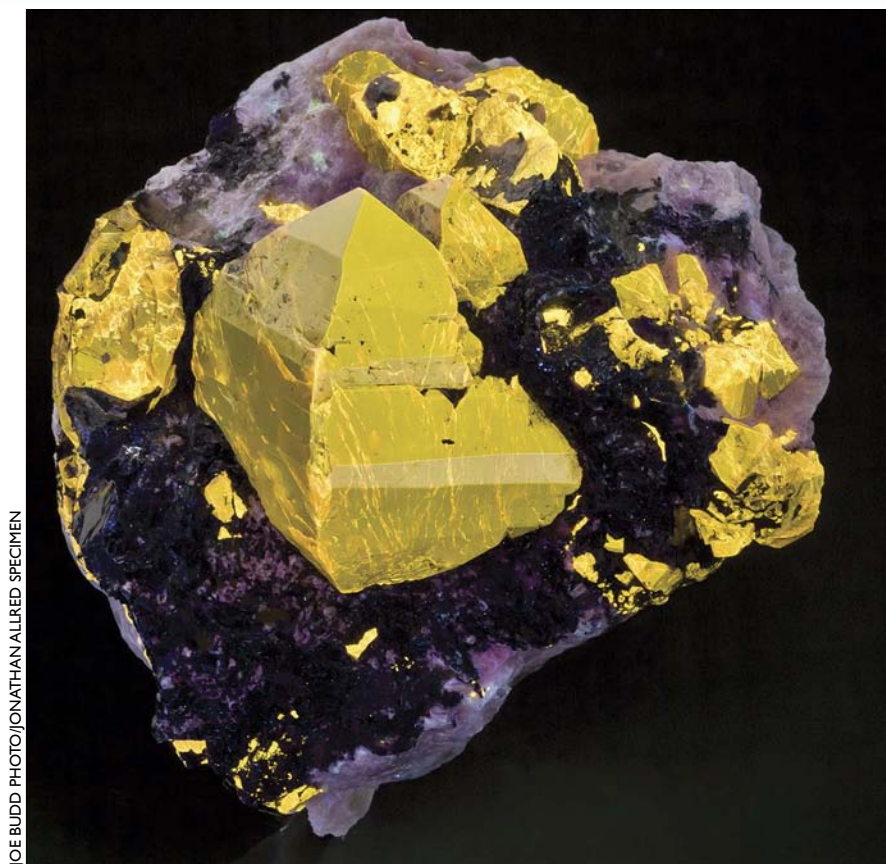
**Rock&Gem**

at

**www.rockngem.com**

and

[www.facebook.com/pages/Rock-Gem-magazine/152002903583](http://www.facebook.com/pages/Rock-Gem-magazine/152002903583)



JOE BUDD PHOTO/JONATHAN ALLRED SPECIMEN

The zircon crystal on this 12.2-cm specimen from Thurfjord, Norway, is exceptional for its size and quality, as well as the color it emits under shortwave radiation.

Publications are, naturally, a key means of communication within the society. Two periodicals go to all members. The first, the "UV Waves", is a bimonthly newsletter that presents members with fluorescent mineral-related articles, reference material, and a cross section of all things fluorescent—including the fairly recent discovery of fluorescent minerals on the moon.

The second, the "Journal of the Fluorescent Mineral Society", is an annual publication that covers topics of interest to advanced hobbyists. Technical and scientific aspects of selected topics are covered in greater depth in the journal than would be possible in the FMS newsletter. The journal covers topics such as the causes of fluorescence in minerals, including the role of rare earth elements (REE) as activators, the relationship between radioactive beta decay and fluorescence, and fluorescence spectroscopy.

The journal is somewhat unique. Very few, if any, hobby groups the size of the FMS support a publication with such a professional layout and substantive technical content.

### FMS CHAPTERS

As noted earlier, the FMS currently has nine chapters, seven of which are geographically oriented and two that are organized around special interest topics. The two special interest chapters are focused

on research and photography, respectively. Six of the geographically oriented chapters are based in the United States and one is based in Europe. The U.S. chapters are located in the Northeast, Northwest, Rocky Mountains, Arizona, Northern California, and Southern California. Any group of FMS members may petition to become a chapter, provided that it supports and affirms the mission of the society.

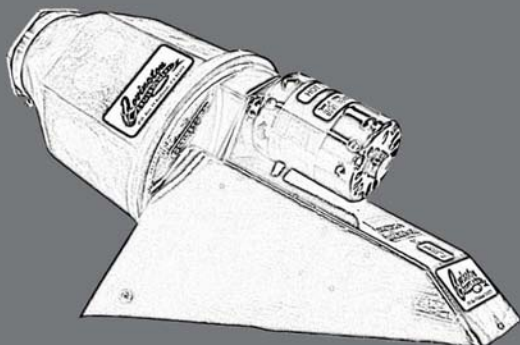
Chapters organize themselves in a number of ways, undertake a wide variety of activities, and have varied interests. Most chapters encourage members to exhibit at major shows and actively support educational and outreach activities that promote a greater understanding of fluorescence.

Several chapters emphasize collecting and others concentrate on hosting meetings and seminars. Despite difficulties with liability insurance, members collect far and wide. Collecting groups routinely collect not only at sites throughout the United States and Canada, but also at localities in Sweden (Långban), Greenland (Ilimaussaq complex), and South Australia (the Puttapa Zinc mine, near the Northern Flinders Ranges). All chapters offer fellowship opportunities to members.

Chapter outreach and educational activities include displays at local and national shows, informative talks and demonstra-



## DELUXE TUMBLER



Tumble glass and stones quickly with the Covington Deluxe Tumbler. The unique barrel shape is a Covington exclusive design. Order Today!  
[www.covington-engineering.com](http://www.covington-engineering.com)  
909-793-6636

52<sup>nd</sup> Annual  
Delaware Mineralogical Society

# Gem, Mineral & Fossil Show



**March 7 & 8,  
2015**

Saturday 10:00 am - 6:00 pm

Sunday 11:00 am - 5:00 pm

**Delaware Technical and Community College**  
**400 Churchmans Rd.; Stanton, DE 19713**  
**(Exit 4B, I-95)**

Adults \$6.00, Seniors \$5.00, Juniors (12-16 yrs) \$4.

Children under 12 accompanied by adult- Free.

**Dealers, Demonstrations, Exhibits**

Info & Coupons at:  
**[www.delminociety.net](http://www.delminociety.net)**

Deming Gem & Mineral Society, Inc.

## 50th Annual Rockhound Roundup Gem & Mineral Show



- ◆ Public Invited
- ◆ Free Admission
- ◆ Free Parking

Buyers Market • Jewelry • Demos  
Displays • Educational Demos  
Rocks & Rock Related Items  
Guided Field Trips

Friday Nite Silent Auction - Saturday Nite Live Auction

**March 12-15, 2015**

9 a.m. - 5 pm. (Thurs.- Sun.)

Location: S.W. New Mexico State Fairgrounds  
in Deming, New Mexico

Visit our website at: [www.thedgms.com](http://www.thedgms.com)

Deming is

**NEW MEXICO** *True*

[www.ExploreDeming.com](http://www.ExploreDeming.com)

Show Contact:

Marilyn Page 575-544-9019

# DO YOU TUMBLE?

Feather River Lapidary & Mineral Society  
presents the

## 2015 WORLD WIDE ROCK TUMBLING CONTEST

Entry fee of \$30.00  
includes 3 lbs.  
rough and shipping  
Contest begins  
January 1, 2015



**CASH PRIZES  
AWARDED TO  
TOP 3 WINNERS**

For more info. please visit our web site at  
**[featherriverrocks.org](http://featherriverrocks.org)**



## Lapidary Supplies and Equipment

Most Orders Shipped within 24 Hours

Authorized Dealers of: Crystalite, Lapcraft, Covington, Inland, MK Diamond, Raytech, Diamond Pacific, Graves and more.

Order Toll Free (866) 929-8575  
email: [info@arrowheadlapidarysupply.com](mailto:info@arrowheadlapidarysupply.com)

**Arrowhead Lapidary Supply**

P. O. Box 247  
Wellington, OH 44090

Website: [arrowheadlapidarysupply.com](http://arrowheadlapidarysupply.com)

## WHOLESALE OFFER

Shortwave & Longwave UV  
Field Light kit \$59.99!

[www.uvtools.com/rgpromo2](http://www.uvtools.com/rgpromo2)

Ultraviolet Tools LLC  
PO Box 7523

Round Rock, TX 78683  
Phone order: 512-590-4949

[www.ultraviolet-tools.com](http://www.ultraviolet-tools.com)  
[sales@ultraviolet-tools.com](mailto:sales@ultraviolet-tools.com)



Learn the fun hobby of  
**STAINED GLASS!**

Professional **stained glass supplies**, tools, books, kits, patterns, jewels, mosaic and etching supplies, and things you never knew you needed until now. Oh, and glass. Lots of glass.

Send \$3 for our catalog and receive free bonus coupons and "Getting Started in Stained Glass"

**Whittemore-Durgin Glass Co.**  
P.O. Box 305, Rockland MA 02370

Visit our fun store: 825 Market St., Rockland, Mass.  
(800)262-1790 [www.whittemoredurgin.com](http://www.whittemoredurgin.com)

## Easy Steps Video

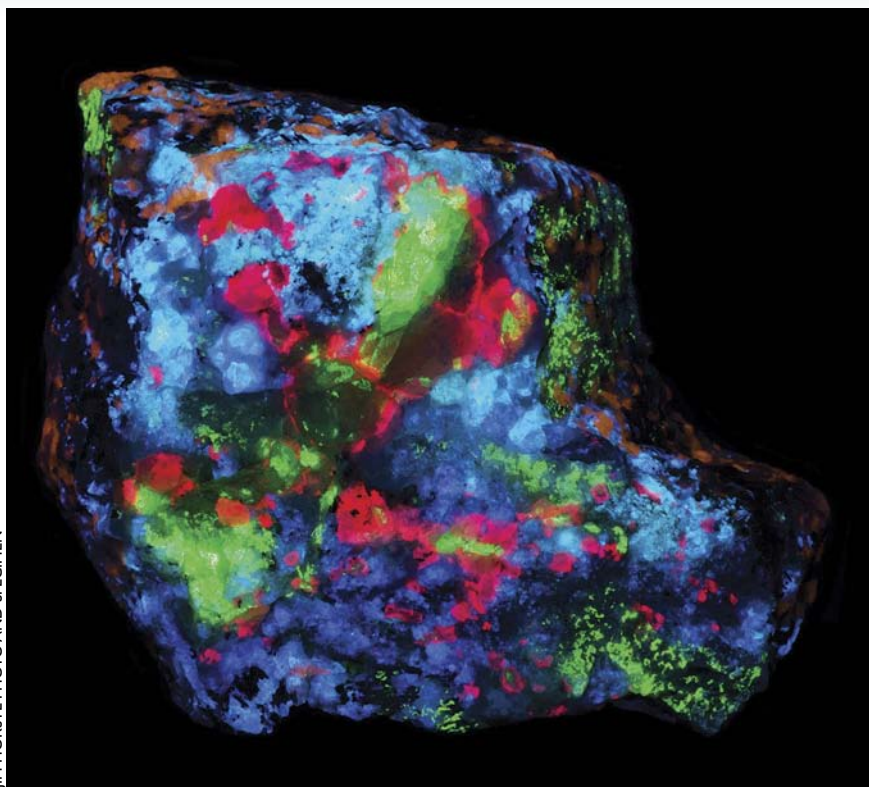
Step-by-Step Method

**Jewelry Design  
Jewelry Crafting  
Gem Cutting**

Lapidary, Faceting, Carving, Wire Work, Bead Stringing & Knotting, Soldering, Repair, Wax Casting and more. One of the most extensive DVD libraries by master designers and master craftsman. VHS tapes also available.

For a FREE Catalog  
call 800.382.3237

[www.EasyStepsVideo.com](http://www.EasyStepsVideo.com)



JIM HORSTE PHOTO AND SPECIMEN

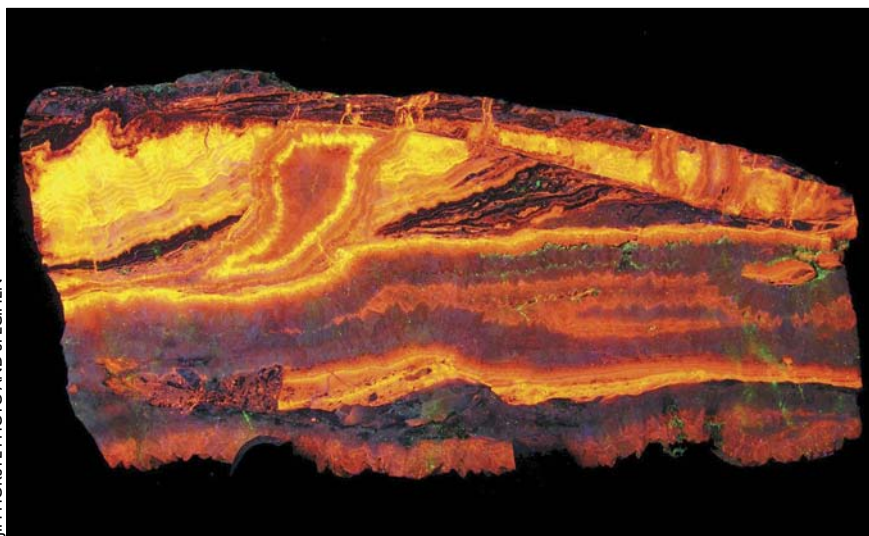
Under shortwave UV, "fantasy rock" from the Taseq (West) Slope of the Narsaq River Valley (Greenland) reveals at least four minerals: tugtupite (red), analcime (blue), chkalovite (white and violet), and sodalite (orange).

tions, and functioning as local go-to sources for those with questions about fluorescence. Historically, society chapters have worked with schools to assist their science programs and have provided fluorescent minerals for study groups and local gem and mineral clubs. Some chapters organize field trips to collect fluorescent minerals that are then shared with others.

Meetings and seminars are the main activities of some chapters. The Northeast Chapter, for example, holds a meeting each

fall that includes several prominent speakers, displays, selling and swapping, and good food and fellowship.

The FMS holds an annual meeting that is hosted by one of its chapters. Annual meetings have typically been held in connection with the Tucson Gem & Mineral Show®. In a departure from this tradition, the 2015 annual meeting will be hosted by the Northwest Chapter in connection with the annual Symposium of the Pacific Northwest Chapter of the Friends of Mineralogy.



JIM HORSTE PHOTO AND SPECIMEN

This attractive slab of calcite from the Bumble Bee mine in Yavapai County, Arizona, shows a fiery yellow fluorescence under longwave UV.



The Tucson Gem and Mineral Society Proudly Presents:

# THE 61<sup>ST</sup> ANNUAL TUCSON GEM AND MINERAL SHOW<sup>®</sup>

## *Minerals of Western Europe*



Tucson  
Convention  
Center

February 12 - 15, 2015

### **FEATURING:**

- Retail Dealers • Special & Guest Exhibits
- Educational Area • FREE Lecture series

For more information visit [www.tgms.org](http://www.tgms.org)







**Super  
Nova**

**Diamond**



## Soft Discs

### No Break-in required

Lasts upto 4 times longer than Imported Discs

**6"-19<sup>95</sup>**  
**8"-29<sup>95</sup>**

Available in sizes upto 24"

**Best Prices & Quality**



Made in USA

For:  
Ameri-Tool  
Hitech  
Inland & others

**Johnson Brothers Lapidary** Prices & specifications subject to change without notice  
Ph: 714-771-7007 - Email: sales@jbfc.com

**Web: www.JBFC.com**

**SEE US IN TUCSON AT ELECTRIC PARK BOOTH # OS-B4**

In 1996, the FMS organized a special display of fluorescent minerals in connection with the Tucson Show. Consisting of 76 cases, it was the largest display of fluorescent minerals ever assembled. Such displays are not routinely possible because of the need for special lighting equipment. However, primarily through its chapters, the FMS continues to participate in the larger national shows, as well as numerous local shows. The society organizes a special case of fluorescent minerals for the Tucson Gem & Mineral Show, and for the Denver Show, the Rocky Mountain Chapter organizes and staffs a special room devoted to UV displays. With as many as 10 display cases, this exhibit is one of the largest offered to the public.

Chapters in Northern and Southern California and the Northeast sponsor displays at local shows that are drawing increasing num-

In 1996, **the FMS** organized a special display of **fluorescent minerals** in connection with the Tucson Gem & Mineral Show. Consisting of **76 cases**, it was the largest display of fluorescent minerals **ever assembled**.

bers of visitors. A large exhibit is also planned for the 2015 annual meeting (mentioned above), to be held in Kelso, Washington.

The Research Chapter is working on the development of a color identification/standardization model. A color standard is desirable because we do not all see color the same way. A blue-green mineral, for example, may look blue to one person and green to another. Efforts are also underway to define the loss of UV radiation in UV lamps from the solarization of UV filters and identify methods of mitigation.

The Photography Chapter has embarked on the task of updating its photography information to encompass the use of digital cameras for photographing fluorescent minerals. This group is also concerned with identifying and controlling the many factors that affect (degrade) a photographic image when it is displayed on an electronic screen (e.g., monitor) or on the printed page.

MINERAL AND GEM ID TOOLS			
<p><b>Mineral Search Software v4</b></p>  <p>CD for Win XP or later. 700 minerals w/photos Identify/Catalog. <b>\$69</b></p>	<p><b>Mineralab</b></p> <p>2860 W. Live Oak Dr. G, Prescott, AZ 86305 <b>(800) 749-3766 (928) 442-1155</b> <b>www.mineralab.com</b> MC/VISA/Amex/Disc Add \$10.00 S&amp;H</p>		<p><b>Hardness Picks</b></p> <p><u>Metal</u> points Mohs' 2 thru 9 with Streak Plate, Magnet, Wood case. Excellent Gift! <b>\$79</b></p> 
<p><b>Gem-n-Eye Digital Refractometer</b></p>  <p>Measure RI to 2.700. Accurate to .01 Easy to read No toxic fluid. <b>\$395</b></p>	<p><b>Geiger Counter</b></p> <p>Detect radioactive rocks and minerals. Meter/ audio clicks to 50 mR/hr. <b>\$279</b></p> 	<p><b>Gem Tester Colored Stone Estimator.</b> Touch probe to rough, cab, faceted, or mounted stones. <b>\$219</b></p> 	
<p><b>Raytector 5-2 UV Lamp</b></p> <p>Portable Combo SW LW, Rechargeable, two 6 watt bulbs, w/ 110V adapter. <b>\$289</b></p> 		<p><b>Specific Gravity Kit</b></p> <p>For your <u>Electronic Scale</u> Measures Specific Gravity of Gems and Minerals. Specify version either for Bench Scale or Pocket Carat Scale. Easy to use! <b>\$79</b></p> 	

www.johnbetts-fineminerals.com



**John H. Betts - Mineral Dealer**  
New York City, New York  
*Cash paid for mineral collections! Call 212-678-1942*

# Diamond Blades

Best Prices & Quality

## 303j - Sintered

Starting at

Size	Price
4 x .014	19.40
5 x .020	25.00
6 x .014	22.00
6 x .020	24.40
6 x .025	27.00
7 x .050	41.00
8 x .025	34.00
8 x .032	36.00
10 x .032	50.00
10 x .040	51.00
12 x .065	115.00
14 x .070	133.00
16 x .085	164.00
18 x .085	195.00
20 x .100	235.00
24 x .100	310.00



## Notched Rim

Starting at

Size	Price
4 x .012	4.00
6 x .012	5.00
8 x .025	16.50
10 x .032	23.00
12 x .052	32.00
14 x .067	47.00
16 x .088	75.00
18 x .088	80.00
20 x .098	105.00
24 x .098	155.00

**Johnson Brothers**

714-771-7007 - www.JBFC.com Prices & specifications subject to change without notice

**SEE US IN TUCSON AT ELECTRIC PARK BOOTH # OS-B4**

Keep up with

## BREAKING NEWS

in Rockhounding

between issues of

# Rock&Gem

at

[www.rockngem.com](http://www.rockngem.com)

and



[www.facebook.com/pages/Rock-Gem-magazine/152002903583](https://www.facebook.com/pages/Rock-Gem-magazine/152002903583)

Beckett  
**Rock&Gem**

**NOW AT YOUR  
FINGERTIPS...**

Save 78% OFF the Newsstand! Download our **FREE APP**  
and purchase 1 - Year Digital Subscription (12 Issues)  
for only **\$12.99**



For any questions  
on downloading  
the app, contact  
800-764-6278

Available on



**Get 1 Digital issue FREE**

when you subscribe at [www.beckettmedia.com/bkt-2022](http://www.beckettmedia.com/bkt-2022)



## Diamond Wheels



Nickel Plated Starting at

Size	Price
6 x 1-1/2	54.95
8 x 1-1/2	74.95

## Diamond Discs



Nickel Plated Starting at

Size	Price
6"	7.95
8"	9.95

## Diamond Belts



Resin Bond

Size	Price
6 x 1-1/2	29.95
6 x 2-1/2	39.95
8 x 3	59.95

## Expanding Drums



Starting at

Size	Price
6 x 1-1/2	40.00
6 x 2-1/2	45.00
8 x 3	50.00

**Johnson Brothers Lapidary**

Ph: 714-771-7007 - Email: sales@jbfc.com

Prices & specifications subject to change without notice

**Web: www.JBFC.com**

**SEE US IN TUCSON AT ELECTRIC PARK BOOTH # OS-B4**

"The Facetron is a fine technological creation with logical, thoughtfully placed controls which can meld man and machine into a single precision cutting unit." Stephen C. Gushue, Scranton, PA

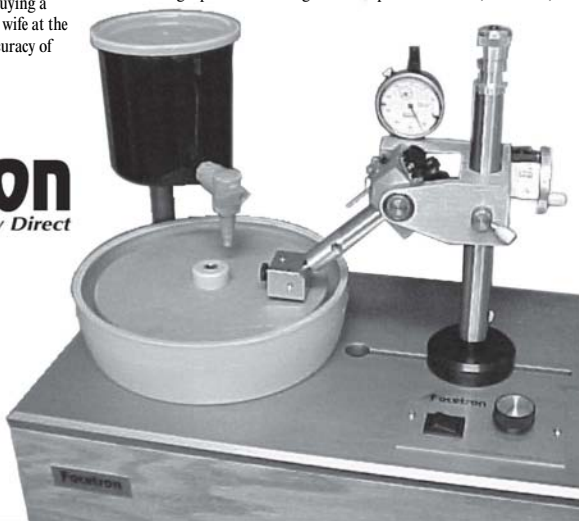
"I consider myself very lucky, having put off buying a new faceting machine until I met you and your wife at the Federation Show. I marveled at the extreme accuracy of the Facetron." Robert Klein, Twin Fall, ID



- Digital Protractor
- Built-in Dial Indicator
- With Hard Stop

**JARVI TOOL CO.**

780 E. Debra Lane  
Anaheim, CA 92805  
714-774-9104 Fax: 714-774-9105  
e-mail: jtfacetron@earthlink.net  
www.facetron.com



## FLUORESCENT from page 54

### COLLABORATION WITH MINDAT

Several activities are underway that will have a significant effect on the entire fluorescent mineral collecting community. Drs. Gerhard Henkel, Peter J. Modreski, and Earl R. Verbeek FMS has published an article on the glossary of fluorescent minerals that was compiled by Henkel ("The Henkel Glossary of Fluorescent Minerals", Journal of the Fluorescent Mineral Society, Vol. 15, 1988-9).

Henkel, who was from Baden-Baden, Germany, made it his goal to systematically document and collect as many of the known fluorescent minerals as possible, and traveled extensively for this purpose. Approximately 200 specimens from his extensive collection are still on display in Bammental, Germany.

At the time of his death in 1990, Henkel's glossary was arguably the most comprehensive list of fluorescent minerals ever compiled. In 91 pages, the glossary lists 566 mineral species and 59 related substances. It also includes entries for numerous varietal, group and alternate names. Each entry contains the name, chemical formula (or composition), fluorescent colors under longwave and shortwave UV radiation, and the localities in which the mineral or substance has been reported.

Henkel's original handwritten notes preserve detailed information on these localities. Society volunteers are currently transcribing this location information into a fully searchable electronic database. When this task is completed, the plan is to bring the Henkel database up to date by supplementing it with more recently obtained information.

The value of any database lies in its accessibility. The FMS is therefore embarking on a collaboration with the leaders of Mindat.org to incorporate information on fluorescence into its database. The objective is to provide comprehensive information on the fluorescent properties of each mineral species at as many locations as possible. When completed, this project will provide the most comprehensive and readily available source of fluorescent mineral information available anywhere.

The FMS has matured considerably in recent years. It is striving to achieve universal recognition as the premier organization and information source for anyone interested in fluorescent minerals. From its humble beginning 43 years ago, the FMS has grown to become an international organization that helps people around the world to understand more about the science, technology and beauty, of the world of fluorescent minerals. ♦

Contact the authors or obtain additional information about the Fluorescent Mineral Society at [information@uvminerals.org](mailto:information@uvminerals.org).



## LAPIDARY EQUIPMENT JS GEMS

Our slogan is "Quality lapidary equipment at discount prices"

\*Ameritool \*Covington Engineering \*Gryphon  
\*Barranca \*Diamond Pacific \*and More!!

**(909) 519-1545**

e-mail: [jsgems@dslextreme.com](mailto:jsgems@dslextreme.com)

**www.jsgemslapidary.com**



**VISIT US AT THE  
FOLLOWING SHOWS!**  
**Quartzsite Show**  
Booth Number  
384, 385 + 386

**At the Tucson Show,**  
they'll be at  
**the Kino Show**  
with Barranca  
Diamond Products  
Booth number #1021.





## See Us In Tucson

JG&M Expo @ Simpson Shuttle Hub  
601 W Simpson Street  
Jan 31 ~ Feb 15, 2015

**Lasco, The Tools More  
Professionals Choose**  
Carving Diamonds  
Small Diamond Drills  
Diamond Core Drills  
Diamond Discs  
Diamond Powders  
And Much More



**Lasco Diamonds  
Work Great On:**

All Types Of Stone  
Precious & Semi Precious Gems  
Glass, Metal, Tile, & Wood  
Plastics, Resins, Composites,  
and More.

**Call For Free Catalog  
800-621-4726**



**LASCO LASCO DIAMOND PRODUCTS**

9950 Canoga Ave #A8 ~ PO Box 4657 ~ Chatsworth, CA 91311

(818) 882-2423 Phone ~ (818) 882-3550 Fax

[www.lascodiamond.com](http://www.lascodiamond.com)

## MINERAL OF THE MONTH CLUB AND CELESTIAL EARTH MINERALS



Join Mineral of the Month Club and have a new mineral shipped to you each month from localities that span the globe. Included in your membership are extensive write-ups that help you learn about the mineral, a newsletter, discounts and member only monthly offerings.



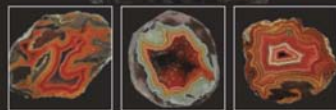
Visit our website,  
**[www.celestialearthminerals.com](http://www.celestialearthminerals.com)**  
for more information, to make mineral purchases and  
for supplies that meet all your collecting needs.

**Call 800.941.5594**

## Dryhead Agate

John T. Hurst

An inside look at the history,  
mining, and natural beauty  
of some from  
Montana's  
Dryhead  
region.



A new book by John T. Hurst  
**DRYHEAD AGATE**  
Mother Nature's Art at its finest

For orders contact the publisher at

- [www.dryheadagate.com](http://www.dryheadagate.com)
- 303-443-7885 or contact
- [john.hurst2@comcast.net](mailto:john.hurst2@comcast.net)

\$35.95 incl. S&H for the 48 States.  
Book dealer pricing upon request.

See p.6 Review in  
Nov. 2012 Rock & Gem

## Keep up with BREAKING NEWS

in Rockhounding  
between issues of  
**Rock&Gem**  
at  
[www.rockngem.com](http://www.rockngem.com)  
and

[www.facebook.com/pages/  
Rock-Gem-magazine/152002903583](https://www.facebook.com/pages/Rock-Gem-magazine/152002903583)

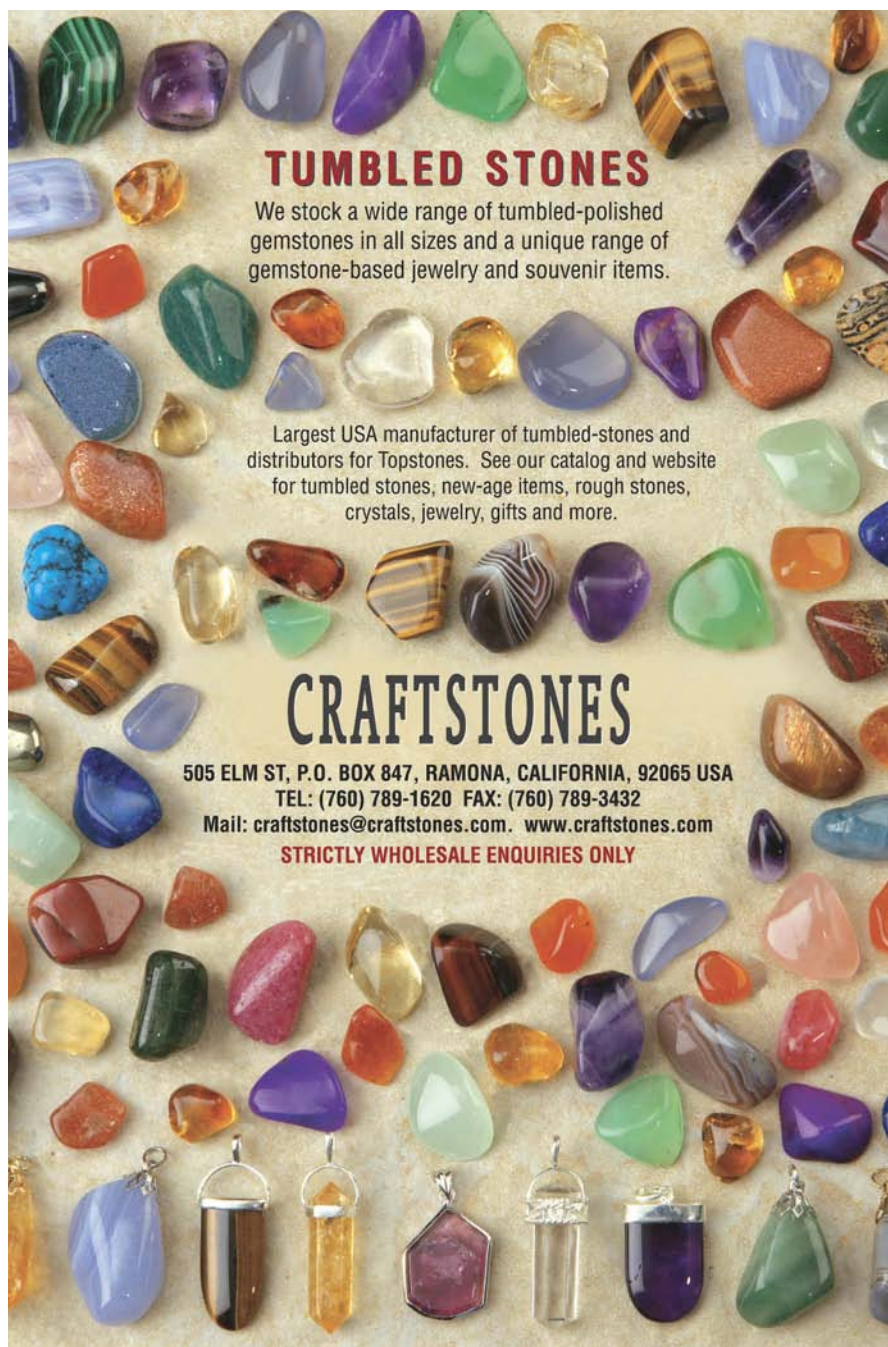
Advertising in

# Rock & Gem

## Pays

Contact Brian Roberts, Advertising Director.  
[BRoberts@RocknGem.com](mailto:BRoberts@RocknGem.com) (623) 327-3525





**TUMBLLED STONES**

We stock a wide range of tumbled-polished gemstones in all sizes and a unique range of gemstone-based jewelry and souvenir items.

Largest USA manufacturer of tumbled-stones and distributors for Topstones. See our catalog and website for tumbled stones, new-age items, rough stones, crystals, jewelry, gifts and more.

**CRAFTSTONES**

505 ELM ST, P.O. BOX 847, RAMONA, CALIFORNIA, 92065 USA  
TEL: (760) 789-1620 FAX: (760) 789-3432  
Mail: [craftstones@craftstones.com](mailto:craftstones@craftstones.com) [www.craftstones.com](http://www.craftstones.com)  
**STRICTLY WHOLESALE ENQUIRIES ONLY**

## Show Dates from page 36

Sun. 10:00 AM-5:00 PM; Admission Free; contact: Lola Lamb, 2200 Cecilia, Big Spring, TX, 79720, (243) 263-3340; e-mail: [lolabellelamb@yahoo.com](mailto:lolabellelamb@yahoo.com)

**13-15—KANSAS CITY, MISSOURI:** Annual show; Greater Kansas City Association of Earth Science Clubs, KCI Expo Center, 11730 NW Ambassador Dr; Fri. 9 AM-8 PM, Sat. 10 AM-7 PM, Sun. 10 AM-5 PM; Admission \$6, Children 5-12 \$3; 0-4 Free; 70+ Retail and wholesale dealers; swap; educational exhibits and lectures; benefit auction.; contact: Bruce Stinemetz, 2706 S Cherokee, Independence, MO, 64055, (816) 795-5159; e-mail: [kcgsinfo@yahoo.com](mailto:kcgsinfo@yahoo.com); Web site: [www.kcgemshow.org](http://www.kcgemshow.org) or [www.gemshowkc.org](http://www.gemshowkc.org).

**13-15—PLEASANTON, CALIFORNIA:** Wholesale and retail show; Gem Faire Inc, Alameda County Fairgrounds, 4501 Pleasanton Ave; Fri. Noon-6pm, Sat. 10am-6pm, Sun. 10am-5pm; Admission \$7, Children Free (ages 0-11); Fine jewelry, precious & semi-precious gemstones, millions of beads, crystals, gold & silver, pearls, minerals & much more at manufacturer's prices. Exhibitors from around the world. Jewelry repair & cleaning while you shop. Free hourly door prizes.; contact: Yooy Nelson, (503) 252-8300; e-mail: [info@gemfaire.com](mailto:info@gemfaire.com); Web site: <http://www.gemfaire.com>

**13-15—HILLSBORO, OREGON:** Annual show; Tualatin Valley Rock & Gem Club, Hillsboro Fair Plex, 873 NE 34th Avenue; Fri. 9-5, Sat. 9-5, Sun. 10-5; Admission \$1, Children 12 and under Free; contact: Walt Butler, PO Box 641, Forest Grove, OR, 97116; e-mail: [HYPERLINKmailto:Waltercbutler@comcast.net](mailto:HYPERLINKmailto:Waltercbutler@comcast.net)

**14-15—KALISPELL, MONTANA:** Annual show; NW Montana Rock Chucks, Flathead County Fairgrounds, 265 North Meridian Road; Sat. 10-5, Sun. 10-4; Admission \$1.00, Children Free; contact: Kathy Fager, PO Box 5541, Kalispell, MT, 59903; e-mail: [HYPERLINKmailto:babcockk@montanasky.net](mailto:HYPERLINKmailto:babcockk@montanasky.net)

**20-22—TACOMA, WASHINGTON:** Wholesale and retail show; Gem Faire Inc, Tacoma Dome, 2727 E D St; Fri. Noon-6pm, Sat. 10am-6pm, Sun. 10am-5pm; Admission \$7, Children Free (ages 0-11); Fine jewelry, precious & semi-precious gemstones, millions of beads, crystals, gold & silver, pearls, minerals & much more at manufacturer's prices. Exhibitors from around the world. Jewelry repair & cleaning while you shop. Free hourly door prizes.; contact: Yooy Nelson, (503) 252-8300; e-mail: [info@gemfaire.com](mailto:info@gemfaire.com); Web site: [HYPERLINKhttp://www.gemfaire.com](http://www.gemfaire.com)

**20-22—ASHEVILLE, NORTH CAROLINA:** Annual show; Mountain Area Gem and Mineral Association, Camp Stephens, Clayton Road; Fri. 9:00 am-6:00 pm, Sat. 9:00 am-6:00 pm, Sun. 9:00 am-5:00 pm; Admission Free; Numerous vendors offering gems, minerals and fossils from North Carolina and around the world.; contact: Richard Jacquot, POB 542, Leicester, NC, 28748, (828) 779-4501; e-mail: [rick@wncrocks.com](mailto:rick@wncrocks.com); Web site: [HYPERLINKhttp://www.americanrockhound.com](http://www.americanrockhound.com)

**20-22—ALBUQUERQUE, NEW MEXICO:** Annual show; Albuquerque Gem & Mineral Club, Expo NM, 300 San Pedro NE; Fri. 10 am-6 pm, Sat. 10 am -6 pm, Sun. 10 am-5 pm; Admission \$3, Children Free under 13; Friday is Dollar Day! 54 dealers, gems, minerals, jewelry, fossils, lapidary, equipment, tools, door prizes, raffles, silent auctions, junior table, live wolf & mineral ID.

continued on page 60

<p><b>GOLD SPECIMENS GOLD NUGGETS GOLD NUGGET JEWELRY</b></p>	<p><b>We also sell GOLD!</b></p> 
<p><b>14Kt • 12Kgf</b></p> <p><b>Sterling Silver Locket &amp; Findings</b></p> <p><b>Easy Assembly</b></p> <p><b>Satisfaction Guaranteed</b></p>  <p><i>The perfect way to display your treasure. Available in several shapes and sizes, with and without gold.</i></p>	<p>Please visit our newly updated website for quality gold specimens and nuggets.</p> <p><b>MINER'S KEEPERS</b></p> <p><b>(800) 842-8655</b></p> <p><a href="http://www.minerskeepers.com">www.minerskeepers.com</a></p> <p><a href="mailto:information@minerskeepers.com">information@minerskeepers.com</a></p>  <p>P.O. Box 70, Parker, CO 80134 Call for FREE Brochure!</p>






# HOLIDOME. SHOW

## Tucson

# IS Moving!

a hop, skip and gemstone away!

 Holidome. Show will be moving to our new location for the 2015 Tucson Show!

in 2015



## Two Shows - One Location!

4475 South Country Club Road Tucson, AZ



**THE HOLIDOME.®**  
**WILL OPEN EARLIER**  
**SATURDAY JANUARY 31**  
**THRU**  
**SUNDAY FEBRUARY 8, 2015**

Gem & Lapidary Wholesalers, Inc.

P.O. Box 98 Flora, MS 39071-0098 | Phone (601) 879-8832 | Fax (601) 879-3282

E-Mail [info@glwshows.com](mailto:info@glwshows.com) | Website [glwshows.com](http://glwshows.com)





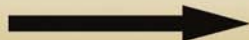
# CABKING

Complete Grinder & Polisher

This diamond wheel grinding and polishing machine is all you need to fulfill your cabbing needs. The adjustable water feed system sets this cabbing unit apart from the rest. Eliminate contamination, control your own water flow and start designing award-winning jewelry pieces today.



CABKING-6V3  
model shown



**CABKING-6V3 - 6" WHEELS**  
List Price: ~~\$1499.00~~  
Our Price: **\$1399.00**

**CABKING-8V1 - 8" WHEELS**  
List Price: ~~\$2499.00~~  
Our Price: **\$2399.00**

Order today at [www.KINGSLEYNORTH.com](http://www.KINGSLEYNORTH.com)



**Kingsley North, Inc.**

P.O. Box 216: Dept 3  
910 Brown St.  
Norway, MI 49870  
Phone: 800-338-9280  
Email: [sales@kingsleynorth.com](mailto:sales@kingsleynorth.com)



## Show Dates from page 58

NM State Fairgrounds, Creative Arts Center, Enter Gate 3 at San Pedro and Copper. ; contact: Paul Hlava, (505) 265-4178; e-mail: [paulhlava@q.com](mailto:paulhlava@q.com); Web site: [agmc.info](http://agmc.info)

**21-22—WHEATON, ILLINOIS:** Annual show; ESCONI, DuPage County Fairgrounds, 2015 Manchester Road, 60187; Sat. 10:00 am-5:00 pm, Sun. 10:00 am-4:00 pm; Admission Free; The Esconi 2015 Gem, Mineral and Fossil show will be running on March 21st & 22nd, at the Dupage County Fairgrounds, 2015 Manchester, Wheaton, IL. The show will feature gem, jewelry, fossil & mineral dealers, live & silent auctions, craft demonstrations, book sales, kid's corner and geode cracking. Children under the age of 16 can receive a free geode at the geode booth! More information on the show is available at [www.esconi.com](http://www.esconi.com); contact: Jeff Lord, (224) 231 7301; e-mail: [jlord83@yahoo.com](mailto:jlord83@yahoo.com); Web site: HYPERLINK "<http://www.esconi.org>" [www.esconi.org](http://www.esconi.org)

**21-22—PORT ANGELES, WASHINGTON:** Annual show; City of Port Angeles, Vern Burton Community Center, 308 East 4th Street; Sat. 9 am-6 pm, Sun. 10 am-5 pm; Admission Free, Children Free; Free rocks for the kids while supplies last, over 30 vendors selling rough & polished rocks, gemstones, fossils, beads, slabs, carvings, crystals, mineral, Uruguay amethyst geodes, shells, jewelry, wire wrapping, woodworking, cabochons, equipment, and much more! Free door prize.; contact: Cindy Kochanek, 308 East 4th Street, Port Angeles, WA, 98362, (360) 417-4550; e-mail: [ckochane@cityofpa.us](mailto:ckochane@cityofpa.us); Web site: [www.cityofpa.us](http://www.cityofpa.us)

**21-22—GAITHERSBURG, MARYLAND:** Annual show; The Gem, Lapidary and Mineral Society of Montgomery County, Maryland, Montgomery Co. Fairgrounds, 16 Chestnut St.; Sat. 10:00am-6:00pm, Sun. 11:00am-5:00pm; Admission \$6.00, Children Free; Gem, Lapidary, and Mineral Society of Montgomery County MD., Inc. 51st Annual GLMSMC Gem, Mineral and Fossil Show At the Montgomery County Fairgrounds - Gaithersburg, Maryland March 21 & 22, 2015. More than 20 dealers will have gems, minerals, fossils, meteorites and crystals for sale. Enjoy demonstrations, over 40 exhibits, raffle, door prizes, free workshop, free specimens for kids, and/or get more information about specimens from your own collection. Those under 18 can dig for free specimens in the kid's mini-mines! ; contact: Jim Kostka, 906 North St NE, Leesburg, VA, 20176, (202) 207-5437; e-mail: [jkostka@juno.com](mailto:jkostka@juno.com); Web site: HYPERLINK "<http://www.glmsmc.com/show.shtml>" <http://www.glmsmc.com/show.shtml>

**21-22—CHAMBERSBURG, PA:** 17201, Pennsylvania. Annual show; Franklin County Rock and Mineral Club, Inc., Hamilton Heights Elementary School, 1589 Johnson Road ; Sat. 10:00 am-5:00 pm, Sun. 10:00 am-4:00 pm; Admission \$5.00, Children 12 and under free with paying adult; Jewelry- Gemstones-Minerals-Fossils-Displays-Demonstrations - Door Prizes ; contact: Mike Mowen, 5979 Altenwald Rd., Waynesboro., PA, 17268, (717) 264-9024; e-mail: HYPERLINK "<mailto:mimo@innernet.net>" [mimo@innernet.net](mailto:mimo@innernet.net)

**21-22—MISSOULA, MONTANA:** 21st Annual Gem, Mineral, and Fossil Show = Gems of Montana; Hellgate Mineral Society, Hilton Garden Inn, 3720 North Reserve Street, 406 532 5300; Sat. 9-6, Sun. 10-5; \$2.00, under 14 free; contact: Bob Riggs, 14 Holiday Lane, Missoula, MT, 59801, (406) 543-3667

**27-28—ADA, OKLAHOMA:** Annual show; Ada Gem, Mineral and Fossil Club, Ada, Oklahoma, 1710 N Broadway; Fri. 8am-6pm, Sat. 9am-5pm;

*continued on page 64*

**Willis Backus**  
Beadmeister, Planet Earth

**1 (800) 338 - 2162**

**South Pacific Wholesale**  
195 Route 302, Barre, VT, 05641

*"Don't let a bead emergency ruin your day!"*

Beads, Rocks, Findings and Jewelry  
**Since 1977**

[mail@beading.com](mailto:mail@beading.com)

[beading.com](http://beading.com)



**Join Us During the Annual Tucson Gem & Mineral Show!**

**Jan 31st – Feb 15th**

**10am – 6pm** (4pm on Feb 15th)



**Tucson  
2015**

**JG&M Expo Simpson St**  
601 W Simpson St • Tucson, AZ 85701

**JG&M Expo Michigan St**  
3300 E Michigan St • Tucson, AZ 85714

**jgmexpo.com**  
or call 520-360-7718

**Featuring Our 2015 Simpson St Exhibitors...**

A&A Company Alaska Scrimshaw Connection Arte Crystals, LLC  
Arte Indigena Imports Ameritool Artistic Dynasty Beauty & the Beads  
Best in Gems Big Blue Coin Jewelry Brilliant Design Chic Avenue Jewelry  
Chi Fashion & Jewelry Design Colombia Piedras del Mundo Dan & Linda Baker  
DiGrande Display & Jewelry.com Colombian Minerals Feng's Trading  
Gemstone Material Interiors Good Beads World Grebreselassie Ethiopian Opal  
Hawaii Design Jewelry Company Himalayan Design Hongkong Genail  
International Gem & Jewelry Jewel Brite Jomar Jewelry Lasco Diamond Products  
Lok Collections Magic Stones Mike Woodward Photography MRK Collections  
Opalos Arte Limon OHCK Hawaiian Natural Pearl River Gem & Jewelry Ravenstein  
Sayed Creations Smaragdus Colombian Emerald Stabler Sapphires & Opals  
Strattos Mexican Fine Art Style & Grace The Capital of Dali Marble  
The Gem Cutter Trans International Gem World Trading XTALS Shop  
Yowah Opals – Australia Yunnan Viewing Stone Association

**...And Our 2015 Michigan St Exhibitors**

Lucky Gem & Jewelry Shichols International Oriental Treasures

**JG&M Proudly Welcomes**



**Yunnan Viewing Stone Association  
& The Capital of Dali Marble**

**On Display for the First Time in Tucson!**

**Don't Miss JG&M Expo Denver, Sept 16th–20th, 2015!**



## CLASSIFIED

## CLASSIFIED

## CLASSIFIED

## CLASSIFIED

### BOOKS AND VIDEO

**NEW! Imperial Jade** of Burma and Mutton-fat Jade of India. Lean secrets about Myanmar's jade trade, China's passion for jade, and India's unique craftsmanship. Essential for jade collectors and traders. Pp. 255, 149 color photos, 25 tables, 13 maps. \$70 Includes shipping in U.S. <http://www.sksent.com/books.htm> AB15

**DRYHEAD AGATE BOOK!** History, prospectors, mining boom-338 photos. \$35.95 incl. S&H (48 states). Order: 1-303-443-7885 [www.dryheadagate.com](http://www.dryheadagate.com) john.hurst2@comcast.net AF14

**Out of print & new books** on rocks & minerals, geology, caves. Vintage N.Y. State Museum Geological Bulletins. Send for free list. Bill Cotrofelf, PO Box 235, E. Arlington, VT 05252 FL14

**New! MONTANA AGATE BOOK** The many faces of MONTANA AGATE collections, by Tom Harmon. 150 fact-filled pages and almost 400 full color photos. Order on-line: [www.harmons.net](http://www.harmons.net) or send check or Money-Order for \$59 + \$6 S+H to: Harmons, 11295 Hwy. 16, Savage, MT 59262 Or call: 406-798-3624

### BUSINESS FOR SALE

**Entire Swarovski crystal inventory for sale due to illness.** All sizes, styles and colors are bagged and priced individually totaling 22000 stones priced at \$2000.00. Detailed inventory spreadsheet available. Contact: [jshoenfelt@constangy.com](mailto:jshoenfelt@constangy.com) or 864-221-9339 for more information.

**Lapidary and jewelry** craft catalog and internet mail order business. Long time established. Turn key and easy to relocate. Business, inventory, and real estate for sale or separately. Rite Agency (307) 322-4258. Owner (307) 331-5504. AM15

### CABOCHONS

**Astounding Cabochons and More.** Amber, ammonite, chrysocolla, chrysoprase, druzy, eilat, fire agate, unusual garnets, jades jaspers. Orbicular, picture, Montana, Mexican agates, labradorite, moonstones, opals, parrot wing, spectrolite, sugilite, sunstone, tabu, thulite, variscite, many more! Also cut gems, crystals, minerals, meteorites, slabs, cab and facet rough, supplies. Color Catalog \$3.00. Riviera Lapidary, Box 40, Riviera, TX 78379-0040. [rivlap@yahoo.com](mailto:rivlap@yahoo.com) BB15

**Free Catalog.** All types of Facet, Star of Cabochon rough and cut gems. The Source. KNIGHTS, Box 411, Waitsfield, VT 05673. (802) 496-3707. E-mail: [knights@madriver.com](mailto:knights@madriver.com) XX14

### COLLECTIONS

**New York State Mineral/Rock Kits** -18 Vintage specimens of New York State. Uncovered in an old building in the Schoharie Valley. Specimens are in a crystal-clear collection box, complete with booklet, numbered, with identification, location etc. Some classic locations: Tilly Foster Mine, Old Sterling Mine, etc. \$39.95 each kit (includes shipping). Bill Cotrofelf, PO Box 235, E. Arlington, VT 05252, 802-375-6782 DH14

**1950's-60's vintage mineral collections** in old wooden display boxes. Many different selections. Send for a free description list and photos. Bill Cotrofelf, PO Box 235, E. Arlington, VT 05252

**Rock Shop Liquidation**, 45 years accumulation, 28 tons, quality petrified wood, bone, variscite, tiffany, jade, red horn coral, agates, jaspers, fossils, equipment, Terry @ 801-707-2809, RockyTerry@msn.com, detailed inventory list. HI14

**Garnet collection sale \$5,830.** 50 gems 75% off appraised value Including Pyrope Hessonites Tsavorites Spessartines Uvarovites Melanite and more. [manfred-ochsner@yahoo.com](mailto:manfred-ochsner@yahoo.com) cell (760) 299-3185 home (661) 867-2388

**Buergerite for sale.** Rare member of the Tourmaline family. Was discovered in 1966 in Mexico. Exact location unknown. Collection mainly thumbnail, but some nice small cabinet pieces. 28 specimens cost \$1,400. Best offer \$500. [addiburns@AOL.com](mailto:addiburns@AOL.com) A15

### FINISHED GEMS

**BUY ONLINE** from [www.deepakgems.com](http://www.deepakgems.com). More than 25000 fine gemstones listed \$0.95 each onwards. 200 Carats various cut gemstones and 15 necklaces \$65.00. [gemcraft2000@gmail.com](mailto:gemcraft2000@gmail.com) IH14

**Multiple Star Quartz** Natural rare titanium quartz USA. Each sphere reflects out twenty 6-rayed stars. Each cab will have seven stars. Colors: pastel blue to rose. Rough: \$100 per oz. Cut 6-rayed \$15 per ct. Cut 12-rayed \$20 per ct. For availability; email [mustersgms@yahoo.com](mailto:mustersgms@yahoo.com). Ph# (209) 518-8795. Dave

### FOSSILS

**Paleoimages®:** museum quality fossil replicas. Fossil sets, ammonites, trilobites, wood, etc.; fossil jewelry. Lithocanis™ americanus: clothing items, selected with the rock hound in mind. Fluorescent minerals and UV lights. [www.tlcenterprises.com](http://www.tlcenterprises.com) FE15

### JADE

**Top quality nephrite jade from the Yukon and BC Canada.** Far below wholesale prices! # 1 quality \$12. lb. # 2 quality \$8. lb. Also have Gem quality RHODONITE reddish pink \$6. lb., SATISFACTION GUARANTEED Ph. Tom 208-351-5576 LK14

### LAPIDARY EQUIPMENT

**Custom Ultrasonic Cleaners** [www.vibratollc.com](http://www.vibratollc.com). Fast, Strong, Reliable. Vibrato, LLC is an American maker corporation. GK14

**ARBOR SHAFT AND VICE REPAIRS** - Send your worn part, we return to factory specs. CigarBoxRock.com Tim, 63160 Nels Anderson Road, Bend, Oregon. USA 541-280-5574 AL14

### LAPIDARY SUPPLIES

**Colorado Springs.** Ackley's carries an extensive line of lapidary and silversmithing supplies, rough rock and mineral specimens. Also jewelry findings, such as French earwires, beads, chains and mountings. ACKLEY'S, 3230 N. Stone, Colorado Springs, CO 80907. HI14

### MINERALS

**ROCKS, GEMS AND MINERALS FOR SALE!**

I have a huge assortment of many rocks, gems and minerals I have to liquidate for far below the values of this large inventory. Satisfaction guaranteed. Call Tom for full information 208-351-5576 BG14

### Wholesale flats of minerals,

Fossils, worldwide quartz, and cut and polished stones listed at Minertown.com, email [dan@minertown.com](mailto:dan@minertown.com) or call (717) 320-2801

**Rare Minerals** and classic specimens from new discoveries & old collections. Over 200,000 specimens on hand, unique gift items and more. Open Tues-Sat, Excalibur Mineral, 1885 Seminole Trail, Charlottesville, VA 22901, (434)964-0875 [www.excaliburmineral.com](http://www.excaliburmineral.com), KJ14

### MINES

**Pala Mining Adventure:** Screen for tourmaline, beryl, spodumene and associated pegmatite minerals. Tables, tools and mine tour included. Day trips \$60 per person most Sundays. Reservations required. (760) 415-9143. More information at [www.digforgems.com](http://www.digforgems.com) BA15

**Collect Minerals in Maine.** We have access to private and closed locations like Mount Mica, Mount Apatite and more! A unique and complete vacation opportunity. Come see "Oma's Attic" local and foreign mineral specimens. POLAND MINING CAMPS, Mary Groves, P.O. Box 26, Poland, ME 04274. (207) 998-2350. [www.polandmincamps.com](http://www.polandmincamps.com) LA15

### OPAL

### THE ROCKDOC WILL NOT BE UNDERSOLD!

Stock: Australian, African, Honduran, Nicaraguan, Louisiana OPALS. Larimar, Peruvian, Blue Amber and other unique minerals. Call, email, or write: 985-790-0861, [therockdoc1@yahoo.com](mailto:therockdoc1@yahoo.com), 253 Southlake Road, Saratoga, Arkansas 71859 USA. Facebook: Jerry Anja Mullin BA15

**Lightning Ridge, Coober Pedy,** Andamooka, Mintabie, Mexican. We're the largest and most consistent Opal suppliers in the industry. Free Catalog. KNIGHTS, Box 411, Waitsfield, VT 05673. (802) 496-3707. Email: [knights@madriver.com](mailto:knights@madriver.com) XX14

### ROCK SHOPS

**Orlando FL, Mineral, Fossil and Artifacts store.** Many minerals, gems, cabochons and fossils, including Florida material: Tampa Bay Coral rough. Ancient Artifacts & Treasures, 1999 W. Fairbanks Ave., Winter Park Florida. 407-678-9300, [www.mcin-tosh55.com](http://www.mcin-tosh55.com) KJ14

**St. George, Ontario, Canada.** Ontario's premier showroom for rocks, minerals, fossils, jewelry making supplies, beads, designer cabochons, and lapidary supplies. Manufacturer of lead free pewter findings, settings, glue on Beaver Tail bails, Slip-on Bails, and unique toggles. Robert Hall Originals. 138 Sugar Maple Road, St. George, Ontario, Canada, N0E 1N0. [www.roberthalloriginals.com](http://www.roberthalloriginals.com) AF14

**Herb's Lapidary Shop** - Route 1, Box 29, South 81 Hwy., Comanche, OK 73529. Southwest Oklahoma's largest! Tons of

rough agate, fossils, onyx and finished product. Wednesday through Saturday, 9 a.m. to 6 p.m. (580) 439-4186 or (580) 439-5347. CB15

**Indianapolis Area (Lawrence).** Findings, supplies, minerals, fossils, equipment, rough and finished stones. No list. JOX ROX, 4825 N. Franklin Road, Indianapolis, IN 46226. Hours: 10:00 a.m. to 6:00 p.m., Monday through Saturday. (317) 542-8855. AL14

**Vermont - BCA Minerals.** East Arlington Antique Center, East Arlington Rd., in the picturesque Village of East Arlington, VT. Open 7 days, 10 am - 5 pm. 802 375-6144. IL14

**WorldOfRocks.com.** Crystals, minerals, fossils, arrowheads, meteorites, specialties of the month, beads and classes. Open every day except Tues. I-94 exit 183 (go N.), 42 N. Huron St., Ypsilanti, MI 48197. (734) 481-9981. BG14

**Montrose, Colorado.** That-Little-Shop, world wide selection of Minerals & Fossils, full line bead shop and gift shop. Closed Mondays. Call for hours (970) 240-8527. 2 miles south of Montrose, 17656 Hwy 550, Montrose, Colorado 81403 AF15

**Philadelphia/Delaware Valley.** Come See The Largest Complete Rock Shop in the East. Gems, Minerals, Fossils, Equipment, Meteorites, Artifacts, Gifts, Custom Jewelry and Repairs. GARY'S GEM GARDEN. Sawmill Village Center, Route 70 (1 mile west of I-295), Cherry Hill, NJ 08034-02412. (856) 795-5077. Visit us at: [garysgemgarden.com](http://garysgemgarden.com) AL14

**Exeter, New Hampshire:** Santerre's Stones 'n Stuff. Minerals, fossils, cabbings and faceting rough, carvings, beads, bead supplies, gemstones, jewelry, and gifts. 42 Water St., Exeter, NH 03833, (603) 773-9393 [www.SanterresStones.com](http://www.SanterresStones.com) BA15

**Marbleton, WY - J L Gray Rock Shop** Used equipment, rough rock, slabs, cabochons, and beads. 614 E. 3rd Street. (307) 276-5208 email: [grayrocks@wyoming.com](mailto:grayrocks@wyoming.com) Facebook: JL Gray Rock Shop AL15

**Austin, Texas: Nature's Treasures 14,000 sq. ft.,** campus includes a retail store with crystals, minerals, agates, fossils, jewelry and unique gifts. The Rock Yard has mounds of rock lining a path with boulders, decorator & natural-scape pieces to the Rock Depot with lapidary materials & equipment, tools plus cutting, drilling and polishing services. Open 7 days; 4103 North IH35 (between 38 1/2 & Airport) 512-472-5015; Rock Depot (Lapidary) 512-833-7760 NTROCKS.COM AL14

**Idaho, Willow Creek Jasper Rough.** \$20.00 per lb., plus postage. No shop. For more info, write LARRY'S ROCK & GEMS, 5810 S. Bogart Lane, Boise, ID 83714. KJ14

**Hwy. 50-95 Rock Shop, Quartzsite, AZ:** Dec.-Feb. Mon.-Sat. 10-4; 645 N. Central Blvd. (Hwy. 95N) Quartzsite, AZ; [bfdgems@yahoo.com](mailto:bfdgems@yahoo.com); 775-781-2047

KJ14

## CLASSIFIED

## CLASSIFIED

## CLASSIFIED

## CLASSIFIED

**World Vin Gems. Delivering Quality, Building Trust.** Buy online precious and semiprecious gemstones. 7, Ganesh Darshan, LT Road, Borivali(W), Mumbai 400092, India. For pricelist worldvngems@gmail.com. www.krsnavingems.com.

**Gems, Jewelry and Specimens-** Herbie's Rock Pile Carries a Large Selection of Single Stones and Specimens, From Agate to Zoisite, Spiritual Jewelry, Cathedrals and Other Gems. Low Prices. Open 7 Days a Week 11:00am-7:00pm. 8317 Painter Ave. Ste. 5, Whittier, CA 90602. (562) 781-4760 See us on Facebook. AF15

**Finest selection of rock and gem worry stones,** stands, spheres, eggs, hearts, pyramids, carvings, runes, tumbled, bookends, Feng Shui crystals starting at \$0.95. 30day money back guarantee. 10% off coupon code: rg10 plus free ship on \$50 order. 866-720-4174 - 16 Years online.

### ROUGH FOR CABLING

**Arizona Red Jasper for sale.** See October

2012 Rock & Gem Magazine story; Big Red Rough \$6.00 lb. Call Chuck (928) 792-7599 AL14

### Pietersite, Charoite, Lapis Lazuli Namibian Blue Pietersite, First & Extra

Grade Charoite, Polished Afgan Lapis Lazuli Rough and slabs available.

Wholesale discounts. (909) 915-9561 jeff@barnhouselapidary.com

### World Leader in Kentucky Agate.

Products for sale: polished specimens, cabs, spheres, slabs and rough. jleedsjewelry.com email: jleedsgold@aol.com cell: 859-582-7406

**1,500 lbs. Biggs Junction Jasper** (Deschutes Jasper) \$3.00 a pound. All as a unit. Pick Up only. Viking West 228 S. Empire Blvd, Coos Bay, OR 97420 (541) 888-5281 AA15

**Multiple Star Quartz** Natural rare titanium quartz USA. Each sphere reflects out twenty 6-rayed stars. Each cab will have seven stars. Colors: pastel blue to rose. Rough: \$100 per oz. Cut 6-rayed \$15 per ct. Cut 12-rayed \$20

per ct. For availability; email mustersgms@yahoo.com. Ph# (209) 518-8795. Dave

**Namibian Pietersite, Mtorolite, Polished Afghan Lapis Lazuli Banded Congolese Malachite and Russian Charoite High quality and unusual rough from around the world. Email jeff@barnhouselapidary.com, or call 909-915-9561.**

### ROUGH FOR FACETING

**Free Catalog.** The largest and most competitive selection facet or cabochon rough in the industry. "The Source." KNIGHT'S HOUSE OF FINE GEMS, Box 411, Waitsfield, VT 05673. (802) 496-3707. E-mail: knights@madriver.com XX14

### SERVICES

**Gem Cutting Services-Sri Lanka.** Heat Treating Sapphires & Faceting Gems. Email: sithygems@sltnet.lk Visit http://www.gemcuttingservice.com FE15

**Lambert Industries, Americans in Bangkok!** Superior faceting: \$1.65 per finished carat for most stones, corundum \$3.25 per

finished carat, less if smaller. Cabling is cheaper. Deal with English, German speaking professionals. Skilled Thai cutter, reliable American / Swiss management. Lambert Industries, 807-809 Silom Road, Bangkok 10500, Thailand. Phone (66) 2 236 4343. E-mail: lambertind@gmail.com, Web site: www.lambertgems.com ED14

**Custom Sphere Cutting.** Collector grade quality spheres precision cut and polished using high-speed Highland Park Lapidary diamond technology. Cutting balls from 1 inch to up to 3 feet in diameter. Top quality cutting with affording pricing. Turn your rock pile into cash. 512-348-8528

**Makisgms Faceting Service.** Professional faceting over .25 carats. Faceted stones. Montana Sapphire facet rough. Facet rough from around the world! Makisgms1@yahoo.com. 639 Cannon St., Helena Montana USA 59601 (406) 495-8690

# Now you can reach Thousands of Readers Worldwide who want to Buy and Sell.

## 1. Write Your Ad

In your email message, or on a separate piece of paper, print or type your ad with a minimum of 25 words. Each word, abbreviation or initial counts as one word. Rates are as follows:

No. of Issues	Rates (per issue)
12 (1 year)	.90 per word
6-11	1.00 per word
1	1.10 per word

All-bold type: Add \$15 per issue

Standard type + background color: Add \$20 per issue

## 2. Choose A Category

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Auction                | <input type="checkbox"/> Gemological Instruments | <input type="checkbox"/> Prospecting        |
| <input type="checkbox"/> Beads & Supplies       | <input type="checkbox"/> Jewelry & Supplies      | <input type="checkbox"/> Rock Shops         |
| <input type="checkbox"/> Books & Videos         | <input type="checkbox"/> Lapidary Equipment      | <input type="checkbox"/> Rough For Cabling  |
| <input type="checkbox"/> Business Opportunities | <input type="checkbox"/> Lapidary Supplies       | <input type="checkbox"/> Rough For Faceting |
| <input type="checkbox"/> Cabochons              | <input type="checkbox"/> Minerals                | <input type="checkbox"/> Rough For Tumbling |
| <input type="checkbox"/> Catalogs               | <input type="checkbox"/> Miscellaneous           | <input type="checkbox"/> Services           |
| <input type="checkbox"/> Collections            | <input type="checkbox"/> Nuggets                 | <input type="checkbox"/> Wanted to Buy      |
| <input type="checkbox"/> Fossils                | <input type="checkbox"/> Opals                   | <input type="checkbox"/> Other              |
| <input type="checkbox"/> Finished Gems          | <input type="checkbox"/> Preforms & Slabs        |   |

## 3. Choose Number of Insertions

Decide how many issues you want your ad to run in and when you want your ad to start and stop. Deadlines for ad copy are as follows:

ISSUE:	ADS IN BY:
October	August 15
November	September 15
December	October 15
January	November 15
February	December 15

## 4. Fill Out The Form

ALL ADS MUST BE PAID IN FULL, IN ADVANCE.  
(MINIMUM CHARGE OF 25 WORDS PER AD, PER ISSUE.)

SUBMIT YOUR AD AND CREDIT

CARD PAYMENT TO:

BRBERTS@ROCKNGEM.COM  
SUBJECT LINE: ROCK & GEM CLASSIFIEDS

OR MAIL YOUR ORDER FORM, AD COPY AND PAYMENT TO:

ROCK & GEM CLASSIFIEDS  
18271 W. DESERT TRUMPET RD.  
GOODYEAR, AZ 85338

(623) 327-3525

FAX (623) 327-2188

ALL LATE ADS RECEIVED AFTER THE DEADLINE DATE WILL RUN IN THE NEXT ISSUE.

Company Name \_\_\_\_\_ Please Print

Contact Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_

E-mail \_\_\_\_\_

Category Heading \_\_\_\_\_

Number of Words \_\_\_\_\_ Cents per Word \_\_\_\_\_

Number of Issues \_\_\_\_\_ Beginning with the \_\_\_\_\_ issue.

Bold: ☐ YES ☐ NO Color Highlight: ☐ YES ☐ NO

Total Enclosed \_\_\_\_\_

(Minimum charge of 25 words per ad, per issue.)

☐ Check (payable to Rock & Gem) ☐ MC ☐ Visa

Account Number \_\_\_\_\_

CW# \_\_\_\_\_ Exp. Date \_\_\_\_\_  
(last 3 digits of code on back of card)

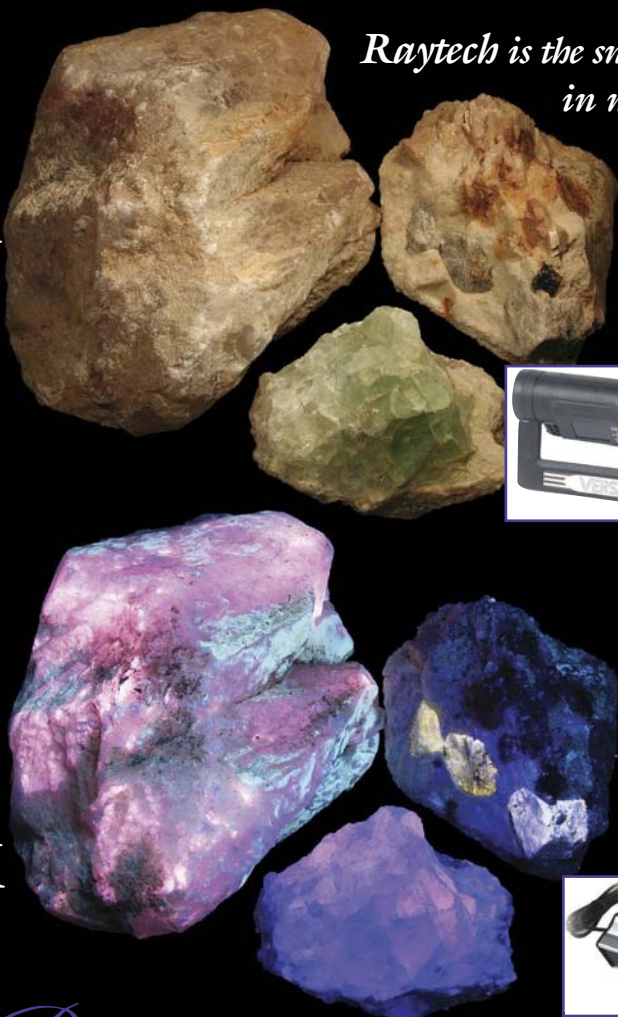
Signature \_\_\_\_\_





## The Smart Choice!

U  
L  
T  
R  
A  
V  
I  
O  
L  
E  
T  
  
L  
A  
M  
P  
S



*Raytech is the smart choice  
in making the  
invisible  
visible!*



*Raytech offers over 20 models of short, long and midwave Ultraviolet Lamps. From portable to display, we have a model that suits your requirements. For over 50 years, Raytech has been the leader in Ultraviolet Lamps.*

Contact your local distributor  
or phone 1-800-243-7163  
**RAYTECH INDUSTRIES**

A Division of Lyman Products  
475 Smith St • Middletown, CT 06457  
Ph: 860-632-2020 • Fax: 860-632-1699  
Visit our website at  
[www.raytech-ind.com](http://www.raytech-ind.com)

## Show Dates from page 60

Admission is FREE; The show will feature various demonstrations and displays of fluorescent rocks, minerals, fossils, lapidary and jewelry. Silent auctions of materials donated by dealers and members will be held hourly. Special Kids' Events: Fossil Dig, also The Petting Zoo. Dealers from the surrounding states (Oklahoma, Kansas, Arkansas, & Texas); contact: Ed Vermillion, P.O. Box 782, Purcell, OK, 73080, (405) 527-6431; e-mail: okieed42@windstream.net; Web site: <http://www.freewebs.com/agmfc/index.htm>

**27-29—SANDY, UTAH:** Wholesale and retail show; Gem Faire Inc, South Towne Expo Center, 9575 S State St; Fri. Noon-6pm, Sat. 10am-6pm, Sun. 10am-5pm; Admission \$7, Children Free (ages 0-11); Fine jewelry, precious & semi-precious gemstones, millions of beads, crystals, gold & silver, pearls, minerals & much more at manufacturer's prices. Exhibitors from around the world. Jewelry repair & cleaning while you shop. Free hourly door prizes.; contact: Yooy Nelson, (503) 252-8300; e-mail: [info@gemfaire.com](mailto:info@gemfaire.com); Web site: [HYPERLINK "http://www.gemfaire.com"](http://www.gemfaire.com)

**27-29—LOVELAND, COLORADO:** Annual show; Fort Collins Rockhounds, The Ranch, Larimer County Fairgrounds, Thomas M. McKee Building; Fri. 4:00 pm-8:00 pm, Sat. 9:00 am-6:00 pm, Sun. 10:00 am-5:00 pm; Admission \$4/day, \$7/3-day, Students 12-18 w/d \$1, Children Free with adult; This year's exhibits feature Colorado Minerals. Metro State University will host a hands-on rock identification educational experience. Door prizes, mineral specimen grab bag sales, children's activity table, demonstrations and the silent auction are ongoing. Gem and mineral dealers sell everything from rockhounding equipment and ore-grade specimens to fine jewelry and stone beads. ; contact: Dave Halliburton, 2506 Pear Court, Fort Collins, CO, 80521, (970) 493-6168; e-mail: [fcrockhounds@yahoo.com](mailto:fcrockhounds@yahoo.com); Web site: [www.fortcollinsrockhounds.org](http://www.fortcollinsrockhounds.org)

**28 - 28 — MIDDLEBORO , MASSACHUSETTS:** auction; Southeastern Massachusetts Mineral Club, Inc., Mitchell Memorial Club, 29 Elm St., corner Elm St. & Rt. 44; Sat. 10:30 AM-3:30 PM; Admission Free; Auction is Saturday, March 28, 2015; contact: Jim Gaudet, 67 Benson St., Middleboro, MA, 02346, (508) 946-0558; e-mail: [rocks2gems@verizon.net](mailto:rocks2gems@verizon.net); Web site: [SEMMC.com](http://SEMMC.com)

**28-29—ANTHEM, ARIZONA:** Annual show; Daisy Mountain Rock and Mineral Club, Diamond Canyon School, 40004 N. Liberty Bell Way; Sat. 9:00 AM-5:00 PM, Sun. 9:00 AM-5:00 PM; Admission \$3.00, Seniors \$2.00, Students \$2.00, Children under 12 free; 30 dealers; gems, minerals, fossils, fluorescents, jewelry, beads, wire trapping, geodes, raffles, kids events; contact: Ed Winbourne, (623) 444 4634; e-mail: [HYPERLINK "mailto:ewinbourne@gmail.com"](mailto:HYPERLINKmailto:ewinbourne@gmail.com)

**28-29—SWEET HOME, OREGON:** 67th Annual Gem and Mineral show ; Sweet Home Rock and Mineral Society, Sweet Home High School Gym, 1641 Long Street; Sat. 10-6, Sun. 10-5; Admission .50 ¢; contact: Joe Cota, PO Box 2279, Sweet Home, OR, 97355, (541) 451 2740

**28-29—DOTHAN, ALABAMA:** Annual show; Dothan Gem and Mineral Club, Houston County Farm Center, 1701 Cottonwood Road; Sat. 9:00-5:00, Sun. 10:00-4:00; Admission is Free; Minerals, rocks, fossils, jewelry. Kids' activities. Door Prizes. Silent Auction. Fun for the whole family. Free admission and free parking. ; contact: Jeff DeRoche, 121 W. Crawford St., Dothan, AL, 36301, (334) 673-3554; e-mail: [arlambrt@comcast.net](mailto:arlambrt@comcast.net); Web site:

*continued on page 66*

**THUMLER'S  
TUMBLER  
ULTRA VIBE**

**Order Toll Free: 1(800) 225-1017**  
**<http://www.thumlerstumbler.com>**



- 30 models & kits
- 1 qt - 4 1/4 gal.
- Thermally Protected
- Durable & Safe
- All Steel Construction

*Building Tumblers  
for Hobby &  
Industry Since 1959*

Write for Catalog

Tru-Square Metal Products • P.O. Box 585 • Auburn, WA 98071





# The R&G Shopper



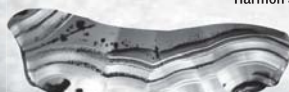
Welcome to the ROCK&GEM Shopper, the one-stop shopping place for your rockhounding and lapidary needs. Every month many thousands of shoppers will browse through this convenient shopping section.

To be part of the Shopper, call Brian Roberts at: 623-327-3525 or email: [BRoberts@RocknGem.com](mailto:BRoberts@RocknGem.com)

## MONTANA AGATE

Rough, slabs, cabs, freeform carvings,  
Specimens, Jewelry and Books  
on Montana Agate.

Harmon's Agate & Silver, Inc.  
11295 Hwy. 16  
Savage, MT 59262



[www.harmons.net](http://www.harmons.net)

## NEW DIRECTIONS GEMS

FREE CATALOG / NEWSLETTER

100% Satisfaction Guarantee

EMAIL: [gemsnewd@gemsnewdirections.com](mailto:gemsnewd@gemsnewdirections.com)

WEB: <http://gemsnewdirections.com>

10% Discount on first new-Orders!!!

PHONE: (866) 219-7727

## WAX PATTERNS

AU-RUS Wax Patterns

5500+ Patterns Online

302 Main Street, Kellogg, Idaho 83837

(208) 786-9301

website: [www.auruswaxpatterns.com](http://www.auruswaxpatterns.com)

## MINERALS, FOSSILS, POLISHED STONES & GEMS

New & Used books on: Geology, Rocks & Minerals,  
Fossils, Gems, Healing Stones, Caves & Cave Exploring.

BCA Minerals, E. Arlington Antique Center,  
E. Arlington, Vermont. Open 7 days 10am-5pm.

## METEORITES

Rare Rocks From Space

I have many excellent specimens at great prices.

Send for a FREE paper list, OR sign-up for

FREE periodic e-lists at:

[brMeteorites\\_list](#) under Yahoo-groups.

Blaine Reed - Meteorites

P.O. Box 1141, Delta, CO 81416

## CarTopCamper.com



Sleep comfortably  
above the rocks,  
mud & critters.

**\$856** (plus shipping)

## www.copperagates.com

- ◆ UNIQUE & Rare Copper Infused AGATES \*  
GEM QUALITY Thomsonite \* Silver \* Metal Crystals
  - ◆ GEM QUALITY Datolites \* Native Copper \* Float Copper
  - ◆ Half Breed's \* Chlorastrolite Greenstone
  - ◆ Lake Superior Agates AND Assorted Agates: BAKERS  
RANCH, CROWLEY RIDGE \* BRENDA \* Assorted Jaspers
  - ◆ MICHIGAN ROCK DESTINATIONS
- Easy, secure on line ordering.

## Mineral Specimens

Cut & Uncut Gemstones

New & Used Lapidary Equipment

## CRYSTAL CAVE

6835 Stirling Rd., Davie, FL 33314

(954) 585-8988 FAX: (954) 585-8989

Fort Worth's Newest  
Rock Shop and Artisan Gallery  
Located inside Ridgmar Mall (lower level)  
**CRYSTAL MOON GALLERY**

We also BUY Collections!  
cutting rough, mineral specimens,  
artistic creations 817-737-2244  
[www.crystalmoongallery.com](http://www.crystalmoongallery.com)

## Knight's

providing rough and cut  
gems for over 40 years

House of Fine Gems

[www.knightsgems.com](http://www.knightsgems.com)

802-496-3707 • P.O. Box 411 • Waitsfield, VT 05673

## Highland Park Lapidary Company

In Stock Now - Get yours before the Tucson Rush!

12" Slab Saw - \$1,595 18" Slab Saw - \$2,650

24" Slab Saw - \$3,600 36" Drop Saw - \$4,250

36" Slab Saw \$9,250

Mention code 2507 and get a free Greenline blade

[www.HPLapidary.com](http://www.HPLapidary.com) 512-348-8528

Expires December 31, 2013



[www.LotOTumbler.com](http://www.LotOTumbler.com)

Belt Inc. • 2746 Hoffman Dr. • NW Owatonna, MN 55060

(507) 451-2254 • [Molly1385LTS@yahoo.com](mailto:Molly1385LTS@yahoo.com)

## The Mineral Gallery

Minerals and Crystals

Top Quality Cabinet Sizes Our Specialty



Visit Our Web site and Online Mineral

Auction Complete with Color Photos at:

<http://www.ExceptionalMinerals.com>

PO Box 91448, Mobile, Alabama 36691

## MarZee Lapidary Tutorial DVDs

**BEGINNING CABOCHON. FLAT LAP.  
LAPIDARY DRILLING. SLOW WOOD LAP.  
CARVING A JADE BANGLE.  
CARVING A JADE MOBIUS.**

email: [marzeetutorials@znet.com](mailto:marzeetutorials@znet.com)

web: [www.marzeetutorials.com](http://www.marzeetutorials.com)

## FREE TREASURE

RESEARCH

BOOK - MAPS CATALOG

VIDEOS - ALL SUBJECTS - LOW PRICES

**1-800-345-8588**

Research Unlimited, Oscoda, MI 48750



## Topaz Mountain Adventures

A Gem and Mineral Adventure like no other!

<http://topazmountainadventures.com>

844-77-TOPAZ

## SUPERIOR AGATES

HAND CUT GENUINE GEMSTONES

& ORIGINAL DESIGNS

BY THE ARTIST.

[SuperiorAgates.Etsy.Com](http://SuperiorAgates.Etsy.Com)

[Facebook.com/SuperiorAgates](http://Facebook.com/SuperiorAgates)



## WHOLESALE OFFER

Shortwave & Longwave UV  
Field Light \$59.99!

[www.UVTools.com/RGPromo](http://www.UVTools.com/RGPromo)

Phone order: 512-590-4949





## GP6-6 WHEEL CAB MAKER

Introducing the New Barranca Diamond GP6-6 Wheel Cab Maker. Incorporating NOVA wheels and high quality brazed diamond wheels, aluminum reservoirs and a 1/3HP Baldor motor. Quality components for the demanding pro or hobbyist.

### Features include:

- Brazed Diamond Grinding Wheels (80 and 170 grit)
- NOVA Resin Diamond Wheels (280, 600, 1,200 and 3,000 grit) plus 14,000 grit end polishing convex disc
- Diamond polishing compound (8,000, 14,000 and 50,000 grit), convex domed end disc and three Polytex Pads
- Six stainless steel fine control water valves
- Powder coated aluminum reservoirs and hoods
- 1/3 HP Baldor motor (1,800 RPM)
- Water pump and GFCI
- One-year limited warranty



Part # 170553



List Price: \$3,645

**Sale Price: \$2,595**

## VISIT BARRANCA DIAMOND

AT THE TUCSON KINO GEM & MINERAL SHOW TENT #22 JANUARY 31 - FEBRUARY 15

## BD7 TRIM SAW



Part # 170789

### Features include:

- Large 14" x 14" cutting surface
- Direct drive motor
- All cast aluminum tank, vise and blade guard
- Table tilts up and out of the way for blade removal/change, adding oil, or cleaning
- Easy to clean tank with oil drain hose and sludge removal plug
- Mounted on a 1/2" polypropylene base
- 7" Professional Lapidary Diamond Blade

Optional rock vise and copolymer hood available



List Price: \$735

**Sale Price: \$550**

Prices valid January 1 - April 1, 2015. FOB Torrance

Barranca Diamond Products • 1315 Storm Parkway, Torrance, CA 90501  
310.523.5867 • 800.630.7682 • [www.barrancadiamond.com](http://www.barrancadiamond.com)

© 2014 MK Diamond Products. Barranca Diamond is a Division of MK Diamond Products, Inc. All Rights Reserved. Images, prices and specifications are subject to change without notice.

## William Holland School of Lapidary Arts

Classes from April through first week of November

For Information, please visit us on-line at  
[www.Lapidaryschool.org](http://www.Lapidaryschool.org)  
or e-mail us [Lapidary@WindStream.net](mailto:Lapidary@WindStream.net)  
(706) 379 - 2126

P.O. Box 980, 230 Lapidary Ln., Young Harris, GA 30582

### Classes Offered Include:

- Baskets
- Beading (seed & reg)
- Cabochons • Carving
- Casting • Chain Making
- Channel • Enameling
- Faceting • Gem ID
- Gem Trees • Glass Fusing
- Inlay • Intarsia
- Lampwork Beads
- Kids' Classes • Mineral ID
- Opals
- Photography for Jewelry
- PMC Silver • Polymer Clay
- Scrimshaw • Silver
- Stained Glass
- Wire Wrapping
- Wire Sculpture

## Show Dates from page 64

HYPERLINK "<http://www.wiregrassrockhounds.com>"  
[www.wiregrassrockhounds.com](http://www.wiregrassrockhounds.com)

**28-29—BELLINGHAM, WASHINGTON:** 54th Annual Rock & Gem Show; Mt. Baker Rock & Gem Club, Bloedel Donovan Community Center, 2214 Electric Avenue; Sat. 10-6, Sun. 10-5; Admission is Free; Show includes gold panning and lapidary demonstrations, fluorescent show, rocks, minerals, fossils, gems, jewelry, club sales and dealers. Also door prizes, scholarship raffle, silent auction, exhibits, food service, special activities for kids, and more; contact: Tracy Jackson, (360) 366-0576; e-mail: [tracyljackson@comcast.net](mailto:tracyljackson@comcast.net); Web site: HYPERLINK "<http://www.mtbakerrockclub.org>"

**28-29—LEXINGTON, KENTUCKY:** Show and sale; Blue Grass Gem and Mineral Club, Clarion Hotel, 1950 Newton Pike; Sat. 10:00 AM-6:00 PM, Sun. 11:00 AM-5:00 PM; Admission \$2, Children \$1; Lexington Rock Gem and Jewelry Show Sponsored by Blue Grass Gem and Mineral Club in conjunction with Rockhounds of Central Kentucky March 28-29, 2015 Clarion Hotel, Lexington, KY located near Exit 115 off I-75/64 at 1950 Newton Pike Show includes minerals, jewelry, equipment dealers, exhibits, KY Agate, fluorescent display, prizes, and auctions. Admission: \$2 Adults, \$1 Children, \$5 Max for Family, Scouts in uniform free.; contact: Allen Ferrell, (859) 277-2469; e-mail: [kyrock2010kentucky@yahoo.com](mailto:kyrock2010kentucky@yahoo.com); Web site: HYPERLINK "<http://www.bggamc.homestead.com>"

**28-29—ANGELS CAMP, CALIFORNIA:** Annual show; Calaveras Gem and Mineral Society, Calaveras County Fairgrounds, 101 Frogtown Rd; Sat. 10 am-5 pm, Sun. 10 am-4 pm; Admission \$4.00, Children 12 & under Free with paying adult; CALAVERAS GEM & MINERAL SHOW 2015 Calaveras Gem and Jewelry Show, Calaveras County Fairgrounds (Frogtown) Sat. March 28, 2015, 10am - 5 pm & Sun. March 29, 2015, 10am - 4pm. Admission is \$4 for adults; kids 12 & under are free if accompanied by a paying adult. There will be numerous exhibits featuring jewelry, carvings, faceted gemstones and polished rocks. There will be demonstrators in disciplines such as faceting gemstones, wire wrapping, chain fabrication, flint knapping and hard rock carving. KIDS AREA has activities and hands on projects. Dealers will be there who sell jewelry making supplies, tools, beads, minerals, gemstones, handcrafted jewelry, meteorites, fossils, books, etc. Snack Bar on site. Free parking and a shuttle service from fairground gate up to the show building. For more information, visit [www.calaverasgemandmineral.org](http://www.calaverasgemandmineral.org), or contact Robin Williams 209-728-8277 or e-mail [amy95247@yahoo.com](mailto:amy95247@yahoo.com). Submitted by: Anna Christiansen [achrist361@sbcglobal.net](mailto:achrist361@sbcglobal.net); contact: Robin Williams, PO Box 1135, Murphys, CA, 95247, 209-728-8277; e-mail: [amy95247@yahoo.com](mailto:amy95247@yahoo.com); Web site: [calaverasgemandmineral.org](http://calaverasgemandmineral.org)

**28-29—Central Point, Oregon:** Annual show; Roxy Ann Gem & Mineral Show, Jackson County Expo, 1 Peninger Road; Sat. 9 am-5 pm, Sun. 10 am-4 pm; Admission \$5.00, Seniors \$3.00, Students \$2.00, Children under 6 Free; Demonstrations, Dealers and De-accessioned Museum Auction Saturday only after show 5:30 pm; contact: Jami Walkins, 316 S Peach St, 74, Medford, OR, 97501, (541) 646-5782; e-mail: [orrockgirl58@gmail.com](mailto:orrockgirl58@gmail.com); Web site: [www.craterrock.com](http://www.craterrock.com)



# RocknGem.com

## Worldwide Websites for Rockhound and Lapidary Hobbyists

### **[www.easycleanllc.com](http://www.easycleanllc.com)**

Always have clean rock saw oil with the Easy Clean Oil Recovery System.™ The website details how easy it is to set up and use the system. [phil@easyclean.com](mailto:phil@easyclean.com)

### **[www.lototumbler.com](http://www.lototumbler.com)**

Vibratory Lot-O-Tumbler built since the 1960's, produces a high quality shine in only 7 days. Superior finish on specimens and gemstones. Great for beginners and used by many professional gem cutters. 507-451-2254 Belt, Inc. 2746 Hoffman Dr. NW Owatonna, MN 55060, 7 Day Start To Finish, Dealer Inquires, Name, Phone, web

### **[www.geodegallery.com](http://www.geodegallery.com)**

We are your source for geodes! Keokuk, Iowa geodes, Mexican geodes, Brazilian & Uruguay amethyst and agate geodes, fine decorator minerals, and numerous resources are all available on our newly redesigned website! Easy, secure, and accurate online ordering 24/7!

### **[www.kristalle.com](http://www.kristalle.com)**

Laguna Beach, California. Specializing in fine mineral and gold specimens for collectors and museums. Booths at major shows around the world.

### **[www.themineralgallery.com](http://www.themineralgallery.com)**

Offering a large assortment of quality mineral specimens in varying sizes. We also feature a bi-weekly rock and gem auction. Cabinet size specimens our specialty. e-mail: [kward@themineralgallery.com](mailto:kward@themineralgallery.com)

### **[www.redskygems.com](http://www.redskygems.com)**

Offering Fine Designer Cabochons For Your Jewelry Masterpiece. Unique Agates, Jasper and more. Easy, secure, online ordering at your finger-tips. [customerservice@redskygems.com](mailto:customerservice@redskygems.com)

### **[www.thegemshop.com](http://www.thegemshop.com)**

Online since 1998, offering rough rock, designer cabochons, fine agate and jasper specimens, beads, publications, lapidary equipment, monthly specials. Mining reports, rock location information and galleries. Order securely online, MC/Visa/PayPal, Toll Free (866) 377-4666. e-mail: [mail@thegemshop.com](mailto:mail@thegemshop.com)

### **[www.sapphiremining.com](http://www.sapphiremining.com)**

The Sapphire Studio in Hamilton, Montana. Montana Sapphire Gravel Concentrates and jewelry. From Rock Creek Deposit near Philipsburg Montana. Also garnet gravel, kids kits, screens. Ship up to 6 gravel bags for \$15.00. 406-381-1392.

### **[www.minertown.com](http://www.minertown.com)**

Worldwide mineral specimens, quartz and gem crystals featuring U.S., Africa, Brazil. Gemstones, eggs, spheres, bookends, tumbled stones and carvings. Individual photographs and detailed descriptions Credit Cards accepted on secure on line shopping cart. 15% off with coupon code: minerals14 enter in the shopping cart discount textbox!

### **[www.optimagem.com](http://www.optimagem.com)**

We have the most accurate colored stone grading in the industry. Our free monthly newsletters include unenhanced color photos of every gem we sell. We provide consistent fine quality calibrated gems with free color matching. In addition we have a huge selection of unique cuts, unusual gem types, crystals and bargain closeouts. Have fun with our monthly gem quiz and enter to win free gems. See our display ad for monthly specials. Call our USA based customer service team today for honest and friendly service. (800) 543-5563 [support@optimagem.com](mailto:support@optimagem.com)

### **[www.gia.edu](http://www.gia.edu)**

Learn from the World's Foremost Authority in Gemology online! Find out about the Gemological Institute of America's courses and programs, browse and shop for gemology instruments and books. Stay up-to-date on diamond and gemstone news and research.

### **[www.rockawayopals.com](http://www.rockawayopals.com)**

Buy Black Opal Gems. Prime selection of cut, solid. Opals from Australia and Ethiopia. Exquisite Opal jewelry. E-mail: [scott@rockawayopals.com](mailto:scott@rockawayopals.com). Gallery: 610 B Canyon Rd. Santé Fe, NM 87501

### **[www.highdesertlapidary.com](http://www.highdesertlapidary.com)**

Offers a large selection of cabbing, carving, cutting rough, tumbling rock, mineral specimens, lapidary saws, blades, equipment and supplies. Artisan crafted jewelry and cabochons. Free shipping on select items. Satisfaction guaranteed. (541) 962-0332

### **[www.woodiesinc.com](http://www.woodiesinc.com)**

A large variety of Geodes-opened and unopened (mostly Keokuk); agates; petrified wood; minerals; gemstones; custom jewelry; geode cracking, sawing, and polishing.™ Guided Keokuk geode trips available.

Ebay/keokukgeode Woodies Rock Shop; 924 Broadway & 1900 Keokuk St; Hamilton, IL 217-847-3881, 309-313-2077

### **[www.lehighmineralauktion.com](http://www.lehighmineralauktion.com)**

Weekly auction of 50 specimens with an assortment of quality but affordable world-wide minerals. Don't miss the bargain prices. e-mail: [jim@lehighminerals.com](mailto:jim@lehighminerals.com)

### **[www.phoenixorion.com](http://www.phoenixorion.com)**

100's of metaphysical and gem stone collectibles at rock bottom prices! Crystal and Feng Shui gifts, gem spheres, eggs, hearts, carvings & more. Free shipping and 2 gift wraps with \$50.00 order! Easy ordering with same day shipping, online or toll free (866) 720-4174.

### **[www.rocksandminerals.org](http://www.rocksandminerals.org)**

Published since 1926. The Magazine for everyone Interested in Minerals, Rocks and Fossils. e-mail: [subscribe@heldref.org](mailto:subscribe@heldref.org)

### **[PrettyRock.com](http://PrettyRock.com)**

Old stock! New Stock! We got rocks around the clock! Some are red, some are blue! Every type, every hue! Get'em here, not over there! We got rocks from everywhere! Save money! Beat sticker shock! Get your treasures at PrettyRock!

### **[www.geologicalwonders.com](http://www.geologicalwonders.com)**

Rock, Mineral, and Gift Shop. Specializing in specimens, crystals, slabs, rough, gifts, and much more. Visit our web-site and online store with a secured shopping cart. Enter Rock and Gem into the coupon code and receive a 10% discount on your first order!

### **[www.greatsouth.net](http://www.greatsouth.net)**

Georgia--Great South Gems & Minerals, Inc. Minerals, fossils, eggs, spheres, cutting material, tumblers and grits, books, stones for wood turners 770-507-7113

### **[World Vin Gems](http://WorldVinGems.com)**

Delivering Quality, Building Trust. Buy online precious and semiprecious gemstones. 7, Ganesh Darshan, LT Road, Borivali(W), Mumbai 400092, India. For pricelist [worldvin-gems@gmail.com](mailto:worldvin-gems@gmail.com). [www.krsnavigems.com](http://www.krsnavigems.com).

### **[www.harmons.net](http://www.harmons.net)**

For all your MONTANA AGATE wants and needs. Books, Rough, slabs, Cabs, handcrafted jewelry, Freeform carvings and specimens.

**RocknGem.com** for as little as \$35 per insertion. Contact [broberts@rockngem.com](mailto:broberts@rockngem.com)  
Ph: (623) 327-3525; Fax (623) 327-2188; Rock & Gem, 18271 W. Desert Trumpet Rd., Goodyear, AZ 85338



# PICKS & PANS

## FREE 80 PAGE CATALOG

TOP "AAA" Quality, Precision Cut  
and Polished GEMSTONES

**For:**  
Gem Collectors, "HARD ASSET"  
Investors, Hobbyist Jewelers  
Wirewrappers, Manufacturing Jewelers

1,000's of different varieties  
and sizes

**Pioneer Gem Corporation**

Dr. Edward J. Nowak, Jr.

PO Box 1513 RG

Auburn, WA 98071-1513

Phone: 253.833.2760

FAX: 253.833.1418

Website: [www.pioneergem.com](http://www.pioneergem.com)

email: [pioneergem@seanet.com](mailto:pioneergem@seanet.com)

Our 42nd YEAR



## Ackley's Rocks

3230 N. Stone Ave.  
Colorado Springs, CO 80907  
(719) 633-1153

We carry mineral specimens,  
rough rock/slabs, tumbled stone/cabs,  
lapidary equipment/supplies,  
metalsmithing tools/supplies,  
sterling silver and base metal findings,  
display items.

See our store at [ackleysrocks.com](http://ackleysrocks.com).  
Give us a call (719) 633 1153



## GILMAN'S

YOUR COMPLETE JEWELRY  
AND LAPIDARY SUPPLY HOUSE

P.O. Box M, 726 Durham St.  
Hellertown, PA 18055

PHONE (610) 838-8767  
FAX (610) 838-2961



## Steven's Rocks & Gifts

FOR ROCK HOUNDS

Mineral Samples · Carvings · Rough  
Rocks · Fossils · Beads · Findings  
Covington Engineering Dealer  
MK Diamond Blades & Pads

TUES - FRI: 1-5 PM  
SAT & SUN: NOON-5 PM CLOSED MON.

PH-FAX 608-655-1011

<http://stevensrockshop.com>

134 East Main St., Marshall, WI 53559

### Gold for Collectors

by Scott Werschky and Carles Curto Mila

This remarkable volume, published in Spain, features more than 450 photographs of superb gold specimens. Some are nuggets, most are crystallized, and many are shown full size, with close ups to highlight unusual details seen in many pieces. The gold specimens are from 24 countries, plus Europe. Each piece stands out beautifully, as they are all photographed on slick black backgrounds.

The text starts with several forwards by noted individuals Bill Larson, Dona Leicht, Mark Muathner, as well as the authors. A brief section on the geology and morphology of gold sets the stage for the reader to enjoy a phenomenal array of gold specimens. Most of the photographs are accompanied by a brief, descriptive comment, in which the specimen size, owner and locality are noted.

The 288-page text is undoubtedly designed to be a coffee table book, but it is also a wonderful compendium of some of the better known golds from private collections and museums, along with many others you have never seen. The only problems I have with the book are its weight, which precludes bedtime reading, and the binding, which is not stitched.

This remarkable work will be an instant conversation starter. The cost in Europe, where I obtained my copy, is €100 (approximately \$125). The book will be available for purchase and signing by the authors at the 2015 Tucson Gem and Mineral Show®.

—Bob Jones

€100 (Mineral Up Editions, [info@mineralup.net](mailto:info@mineralup.net); [www.mineralup.net](http://www.mineralup.net))

### Toolkit for Responsible Mining

The Alliance for Responsible Mining (ARM), in collaboration with Solidaridad, has released a new toolkit to address forced labor in artisanal and small-scale gold mining (ASM). It includes guidelines and practical measures to help miners, civil society organizations, government agencies, and experts in labor and human rights identify and deal with forced labor in ASM. The kit was developed from 18 months of research and field testing by the collaborators.

Humanity United, a U.S.-based foundation dedicated to building peace and advancing human freedom, provided financial support.

The toolkit builds on the collaborators' experience in working with artisanal miners worldwide, and draws in particular from the Fairmined Standard developed by ARM, which addresses forced labor and child labor in certified mines and in the surrounding communities. Download the toolkit at [www.communitymining.org/images/sampled/PressReleases/ForcedLaborToolkit%20-%20FINAL.pdf](http://www.communitymining.org/images/sampled/PressReleases/ForcedLaborToolkit%20-%20FINAL.pdf).



JULIEN HARNEIS VIA  
WIKIMEDIA COMMONS

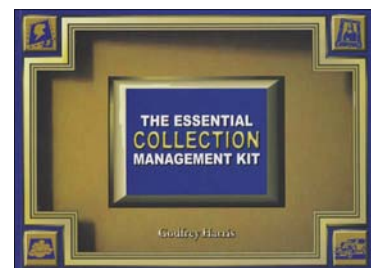
### The Essential Collection Management Kit

by Godfrey Harris

This 56-page, 6.5- by 9.25-inch, softcover book includes 10 specialized and reproducible forms intended to help collectors assemble, categorize, compare, describe, display, inventory, safeguard and value all the elements of their collection. Such records help appraisers, auctioneers, competitors, curators, governmental authorities, heirs, and insurance companies understand and appreciate the elements of a particular collection.

The goal was to provide a simple and easy way for average collectors to develop an organized, written record of the treasures they have accumulated and to make sure that those treasures are preserved and protected in the years beyond the collector's active involvement.

\$8.95 (The Americas Group, [www.americasgroup.com](http://www.americasgroup.com))





# DOUBLE SAVINGS

Two Collector Issues - One Low Price

## TO SUBSCRIBE

› Log on to [www.beckettmedia.com/comag](http://www.beckettmedia.com/comag)

› Call our toll free no 866-287-9383

› Fill out the order form below  
and mail it with your payment  
information to Beckett Media LLC,  
Lock Box No 70253,  
Philadelphia PA 19176-9883



Promo code  
**A74RNGCA**

Take Advantage of this special offer and get a 1 yr subscription to  
**Beckett Rock & Gem** (12 Issues) with a 1 Yr subscription to  
**Beckett Coinage** (12 issues) and **SAVE 63%** off the cover price

Method of Payment ☐ Check enclosed ☐ Credit Card ☐ Money Order

Payment through credit card ☐ Visa ☐ MC ☐ AMEX ☐ Discover

Name on credit card \_\_\_\_\_

Credit card number

Expiration date \_\_\_\_/\_\_\_\_/\_\_\_\_

Subscriber name \_\_\_\_\_ First \_\_\_\_\_ MI \_\_\_\_\_ Last \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Outside of US add \$30 postage per year



[www.beckettmedia.com/comag](http://www.beckettmedia.com/comag)



# Index to Advertisers

Amateur Geologist .....	40	Majestic Press .....	28
Arrowhead Lapidary & Supply.....	52	Mexican Rose Agates .....	42
Au-Rus Wax Patterns.....	65	Mineralab .....	54
Ackleys Rocks .....	68	Mineral of the Month .....	57
BCA Minerals .....	65	Montana Agate .....	65
Barranca Diamond.....	66	Miners Gems .....	41
Beginning Gemstone & Jewelry Carving.....	41	Miner's Keepers .....	58
Bella Stone Pendants.....	42	Minnesota Lapidary Supply Corp.....	30, 44
Blaine Reed.....	65	Nature's Hidden Wonders .....	45
Bill Egleston.....	42	New Directions .....	65
John Betts — Fine Minerals.....	55	New Era Gems.....	30
Broll Tools .....	42	Optima Gem .....	14
CarTop Camper .....	65	Pioneer Gem Corp.....	68
CabStar Pro .....	65	Quartzsite Improvement Agency .....	31
Copper Agates.....	65	Raytech Industries.....	64
Covington Engineering.....	21, 51	Rio Grande Inc.....	19
Craftstones.....	58	Research Unlimited.....	65
Crystal Cave .....	65	Rock Warehouse.....	44, 65
Crystal Moon Gallery.....	65	Rock Wraps .....	41, 42
De Natura .....	33	Samson Gems & Investment Co, LTD .....	65
Delaware Mineralogical Society .....	51	Stevens Rocks and Gems .....	68
Deming G + M Soc. ....	51	South Pacific Wholesale Co. ....	60
Diamond Pacific Tool Corp.....	C4	Joseph Stachura Co, Inc. ....	28
Dryhead Agate.....	57	Superior Agates.....	65
Eloxite Corp .....	21	Spencer Opal.....	49
Easy Steps Video .....	52	Shows of Integrity.....	48
Facet Shoppe .....	20	Tagit.....	49
Feather River Lapidary.....	51	Tanita .....	27
Fire Mountain Gems .....	7	The Gem Shop .....	23, 27
The Foothills.....	20	Tucson Gem & Mineral Society.....	53
John E. Garsow Gems & Minerals.....	15	Tom Courtright .....	41
Gem & Lapidary Wholesalers, Inc. ....	10, 59	Tom Harmon .....	40
Gem Center USA Inc. ....	40	Topaz Mountain Adventures.....	65
Gem Faire, Inc. ....	32	Tyson Wells .....	43, 45
Gilman's.....	68	Tru-Square Metal Products.....	64
Helping Hands .....	36	U.S. Geological Supply.....	C3
Highland Park Lapidary, Co.....	9, 65	Ultra Tec.....	C2
Hughes Associates .....	26	UV Tools .....	65
Innovative Visions .....	40	The Universe Collection .....	48
JGM Expo .....	23, 61	The Village Smithy Opals, Inc.....	43
JS Gems Lapidary.....	56	Vision Industries .....	40
Jarvi Tool Co. ....	56	VR Gem Cutters .....	50
Jersey Instruments .....	36	Whittmore Durgin Glass Co.....	52
Jesco Products.....	26	William Holland School .....	66
Johnson Brothers .....	49, 54, 55, 56		
Kingsley North, Inc.....	3, 50, 60		
Kino Gem.....	11		
Knight's .....	65		
Kristalle .....	29		
Lasco Diamond Products.....	57		
LotOTumbler.....	65		
Lortone, Inc. ....	29		
Martin Zinn Expositions, LLC.....	5		
MarZee Lapidary Tutorial DVD's.....	65		

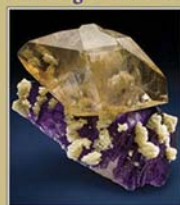
## The Frugal Collector, volume 1

Bob Jones, America's premier authority on gem and mineral specimens, shares his knowledge and adventures in the fascinating world of nature's bounty.

"Bob's easy writing style, selection of photographs and comments, make this volume a 'must have' for any home library."

— American Federation of Mineralogical Societies, 3/12

### The Frugal Collector



by Robert Jones  
From the Publishers of Rock & Gem Magazine

Only  
\$48.95\*  
(includes \$4.95)

To order, send check or money order payable to **Rock & Gem** along with your name and mailing address to:  
**The Frugal Collector, Vol. 1, c/o Beckett Media LLC, 4635 McEwen Rd., Dallas, TX 75244**

\*TX residents, please add 8.25% sales tax. Canadian/Foreign orders, email [customerservice@beckett.com](mailto:customerservice@beckett.com) for postage rate.

## ROCK & GEM

### Customer Service

**TO ORDER A SUBSCRIPTION:** For faster service, subscribe online using our secure server at [www.rockngem.com](http://www.rockngem.com), or send a check or money order for \$27.95 for 12 monthly issues to Rock & Gem, P.O. Box 461137, Escondido, CA 92026-9800.

**WHAT TO DO IF YOU HAVE PAID FOR YOUR SUBSCRIPTION BUT STILL RECEIVE A BILL:** The check and the invoice may have crossed in the mail. You can check your order online at [www.rockngem.com](http://www.rockngem.com). It may take up to four weeks to process your check, so if you wrote the check less than four weeks ago, disregard the bill you received. If you paid for your subscription more than four weeks before you received another bill, send a copy of your cancelled check along with your bill to Rock & Gem, P.O. Box 461137, Escondido, CA 92026-9800.

**TO SOLVE A SUBSCRIPTION PROBLEM:** You can check the status of your subscription online at [www.rockngem.com](http://www.rockngem.com). Remember, it may take up to eight weeks to change an address and 6-8 weeks to start a new subscription. Please give us time to get your magazine to you, and if it still doesn't arrive, please e-mail us at [rockngem@pcspublink.com](mailto:rockngem@pcspublink.com) or call 1-760-291-1549. If you receive a damaged copy, please email us, and we will send you a replacement copy.

**RENEWALS:** It can take up to 6-8 weeks to process your renewal, so don't wait! Renew early so you don't miss an issue. You can renew online at [www.rockngem.com](http://www.rockngem.com) using the Inet number listed on the address label of your magazine, or just return the renewal form with your check or money order. Please do not send cash! If you renew your subscription before your expiration date, we'll add on the new issues at the beginning of your expiration issue. You won't lose any issues by renewing early, and you'll guarantee you won't miss any!

**TO GET ANOTHER COPY OF THE ISSUE:** Additional copies are available at the newsstand, or you may order them online at [www.rockngem.com](http://www.rockngem.com).

**BACK ISSUES:** Back issues are available online at [www.rockngem.com](http://www.rockngem.com).

**MOVING?** You can change your address online at [www.rockngem.com](http://www.rockngem.com) using the Inet number listed on your magazine label, or call 1-760-291-1549. It can take 6-8 weeks to get an address change processed, so make sure you contact your local post office and ask them to forward all of your mail.

**HOW TO PLACE AN AD IN Rock & Gem:** Please contact Brian Roberts via email at [broberts@rockngem.com](mailto:broberts@rockngem.com) or call him at 623-327-3525.

**HOW TO SELL Rock & Gem IN YOUR STORE:** Please contact Tim Yoder at [tyoder@beckett.com](mailto:tyoder@beckett.com) or (972) 448-9003.

**VISIT US AT [www.rockngem.com](http://www.rockngem.com).**

# Index to Rock & Gem JAN. – DEC. 2014

## FIELD TRIPS

### Arizona

Fluorescent Rocks/Jan.  
Mulligan Peak Purple Agate/Jun.

### California

Cronan Ranch Gold/Jan.

### New Mexico

Sandia Mountains Orbicular Granite/Feb.  
Palm Park Barite/Oct.  
Sandia Mountains Travertine/Dec.

### Brazil

One Man's Trash/Jun.

## MINERALS IN DEPTH

Pietersite/Jan.  
Diamonds: Deep-Earth Survivors/Feb.  
Rare Silver Minerals/Apr.  
Heavy Metal Elements/Apr.  
Sulfur/Jun.  
Cerussite/Jul.  
Mica: An Accessory Group/Aug.  
The Aragonite Mineral Group/Oct.  
Garnet: Gem of the Ages/Sep.  
The Apatite Mineral Group/Dec.

## GOLD PROSPECTING

Quest for Native Gold/Jan.  
Metal Detecting for Gold/Jul.  
Montana Placer Mining/Dec.

## FOSSILS

Arizona's Petrified Forest Fossils/Feb.  
Kutch Fossil Park/May  
Florida Fossil Expedition/Nov.  
Fossils: Earth's Photo Album/Dec.

## GEMSTONES

Black Bay Opal/Feb.  
Birthstones, Past and Present, Part I/Mar.  
Four Peaks, Arizona, Amethyst/Mar.  
Birthstones, Past and Present, Part II/Apr.  
Diamond Odysseys/Apr.  
Birthstones, Past and Present, Part III/May  
Birthstones, Past and Present, Part IV/Jun.



3 Feldspar Gems/May  
Collecting on Peridot Mesa/Oct.  
Colorado's Burtis Blue Turquoise/Nov.  
Feather Ridge Plume Agate/Dec.

## COLLECTING

A Rock with a View/Mar.  
Along the Turquoise Trail/Mar.  
The High Price of Minerals/Jul.  
Keokuk Snowball Geodes/Jul.  
The Appeal of Ore/Jul.  
The Mineral of the Month Club/Aug.  
10 Deadly Minerals/Sep.  
Underground in the Rowley/Sep.  
Benitoite: A Father's Legacy/Oct.  
Brazil: A Mineral Paradise/Nov.

## MUSEUMS/EDUCATION

The Perot Museum of Nature and Science/Jan.  
The Perot Museum of Nature and Science/Feb.  
Minnesota Minerals and Agates/Apr.  
The Dallas Mineral Collecting Symposium/May  
Glow Rocks/May  
The 2014 Agate Expo/Oct.  
Colorado's Mining History on Display/Aug.  
The Kotsiomitis Museum of Natural History/Nov.

## PEOPLE

The Mineral Legacy of Benny Fenn/Mar.  
Gem Hunter/May

## HOBBY/CLUBS

Facebook Groups for Rock Clubs/Jun.  
Tucson 2014/Jun.  
A Legacy of Lapidary/Sep.  
The Mineralogical Federation Network/Oct.  
Growing the Rockhound Hobby/Nov.

## CHILDREN

Rock & Gem Kids/Jan.  
Rock & Gem Kids/Feb.  
Rock & Gem Kids/Mar.  
Rock & Gem Kids/Apr.  
Rock & Gem Kids/May  
Rock & Gem Kids/Jun.  
Rock & Gem Kids/Jul.  
Rock & Gem Kids/Aug.  
Rock & Gem Kids/Sep.  
Rock & Gem Kids/Oct.  
Rock & Gem Kids/Nov.  
Rock & Gem Kids/Dec.

## MISCELLANEOUS

Faceting: Vincalis the Agitator/Feb.  
Art or Artifacts?/Aug.  
The Art of Cameos/Aug.  
The Moeraki Boulders/Aug.  
Rockpick Legend Co. /Dec.  
Project: One Ring to Fit Them All/Dec.

To order back issues, send coupon and payment to:

**Rock&Gem Back Issues, 4635 McEwen Road, Dallas TX 75244**

U.S. orders: \$7.99/Copy (includes S&H); Canadian/foreign orders: \$9.99 per copy (includes S&H).

Back issues can also be purchased through our website: [www.beckettmedia.com/rockngem/books](http://www.beckettmedia.com/rockngem/books); Supplies are limited.

Month/Yr \_\_\_\_\_ price \$ \_\_\_\_\_  
Month/Yr \_\_\_\_\_ price \$ \_\_\_\_\_  
Month/Yr \_\_\_\_\_ price \$ \_\_\_\_\_  
Canadian/Foreign postage \$ \_\_\_\_\_  
Total Enclosed \$ \_\_\_\_\_

NAME \_\_\_\_\_  
STREET \_\_\_\_\_  
CITY \_\_\_\_\_  
STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
EMAIL \_\_\_\_\_



# ON THE ROCKS

## Fluorescent Minerals

When I was in the 5th grade at Putney School in Stratford, Connecticut, my teacher, Mrs. Moran, organized a school field trip to the Yale Peabody Natural History Museum in New Haven, Connecticut. Putney School was a typical country school with two classrooms, each holding three grades. Little did I know what an impact that field trip was going to have on the rest of my life.

The Peabody Museum's Dinosaur Room was the highlight of the trip for most of the 4th, 5th and 6th graders. My highlight, however, turned out to be the second-floor mineral room. On the way up, I was fascinated by the Foucault pendulum suspended in the stairwell. For some reason, the minerals intrigued me. I admired the big case of Japanese stibnite specimens and the display of bright-blue azurite crystals from Arizona. To think that these beautiful things had come from within the earth was almost more than a 10-year-old could grasp!

Then I discovered the mineral exhibit that really changed my life. In a small room off the foyer leading into the mineral hall was a display of rocks. Displayed behind a curtain were shelves of quite ordinary gray, black and white, oddly shaped rocks under ordinary light. A small sign indicated that switches on the display case should be worked. The ordinary light turned off, and the shelves of rocks were suddenly bathed in a dim violet light. To my shock and excitement, the rocks suddenly burst into a rainbow of bright colors; the rocks that had been so dull before now flashed red, green, yellow, blue, cream and white. It was as if they were on fire.

As a 10-year-old, I was thrilled. I flipped the control switch again and again, hardly believing what I was seeing. To this day, I wonder how that switch withstood the constant flipping on and off I gave it. I had my first look at minerals that responded to ultraviolet (UV) light. The memory of that exhibit stayed with me through my years of high school and military service, and beyond.

After World War II, still fascinating with minerals, I began serious mineral collect-

ing. By that time, inexpensive, portable UV lamps were available, and I made good use of one. The long wave lamps were little more than a regular mercury vapor tube with a coating on the inside of the glass tube to produce long wave radiation. The commercially made shortwave UV lamps were more costly, but inexpensive kits gradually became available. Shortwave sources consist of a quartz glass tube that allows the UV rays to pass through. A filter has to be used to block the vast majority of the white light also emitted. These filtered shortwave lamps were good for a few hundred hours before the filter solarized. We used to heat the filter in the oven in hopes of extending its life. Finally, in 1980, a new filter was developed that increased the filter life immensely.

To field collect, you had to buy a portable battery outfit—another expense. It was possible to buy a mercury vapor germicidal lamp, buy a UV filter from Corning, and assemble your own shortwave lamp. It was crude, but effective. The cost of equipment in those days did discourage some collectors from getting into the UV mineral hobby.

Today, the lamps are so much more effective and efficient. In fact, while we only had long wave and shortwave lamps, now middle wave lamps are also available that elicit a different response from many rocks. The middle wave lamps are a bit different in that the glass envelope has different phosphors coating the inside of the glass tube. These emit UV that differs in wavelength from the normal long and short wave radiations.

I made collecting trips to the pegmatite mines of Connecticut and to the famous zinc mines at Franklin, New Jersey. Exploring the Connecticut pegmatite mines at night was easy. Many had operated

during the war to get beryllium, but after the war they shut down. Unlike today, there were few, if any, restrictions on entering the properties.

To collect at Franklin, we would drive there on a weekend and visit the Buckwheat and the Parker dumps. To collecting during the day, we covered ourselves with a blanket until a raging headache signaled that it was time to quit.

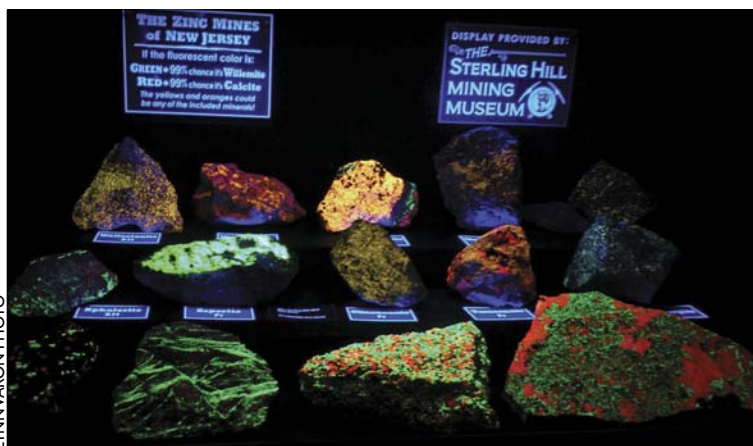
There was no darkened shack. Collecting at night was a lot more productive. In those days, the dumps were loaded with good specimens. The Parker dump was particularly popular, as it yielded some of the less common species like esperite, which was called calcium larsenite in those days.

When it came time to work on my master's thesis in the 1950s, my geology professor, Bobby Brown, suggested I do one for him. I chose—what else?—"Luminescent Minerals of Connecticut", and field collecting at more than 70 localities was easy.

Even though I was really serious about collecting fluorescent minerals, learning about them was not an easy task. Books on fluorescence were technical, not suited to amateurs, and often out of date. The fluorescent minerals you could see on public display were few and far between. Even some museums ignored the subject. Dealers at mineral shows completely ignored that aspect of the hobby. I don't recall ever seeing a fluorescent mineral display at any mineral show, including major shows, in the 1950s and '60s.

Amateur collectors filled the literature gap and began to produce small papers on specific fluorescent mineral localities. My thesis was published by Fluorescent House, of Branford, Connecticut, and the 2,000 copies we printed sold out in a short time. I followed that paper with "Fluorescent Minerals of Franklin and Sterling Hill, New Jersey". Again, it sold out in a hurry. Mineral books contained no photographs of fluorescent minerals. The abhorning fluorescent mineral hobby was gaining steam!

In 1959, while subscribing to *Rocks and Minerals* magazine, I wrote to Editor Peter Zodac asking why he did not have a column on fluorescent minerals. After all, he



It was a display of fluorescent rocks such as this that captured my 10-year-old imagination and set me on the path to collecting fluorescent minerals.

had columns on micromounting, sand collecting, and a couple of other obscure aspects. His answer surprised me: He simply said there was no fluorescent mineral column because I had not written it! So I did, for 12 years.

Fast forward to 1971. This is the year the Fluorescent Mineral Society (FMS) was formed, initiated by Don Newsome and others. The timing was perfect. The availability of UV lamps was improving, and more collectors were seeing exhibits of minerals that fluoresced. Still, these minerals were treated more as a novelty than something serious. Fortunately, that has changed, thanks in large part to the FMS. The organization has evolved into an engine for promoting the fluorescent mineral hobby at major shows, but it goes well beyond that. By publishing excellent research and news items on fluorescent minerals, the FMS has really advanced interest and study in this aspect of mineral collecting.

I must admit that I did not join the society when it was formed. I was involved in teaching and writing for *Rocks and Minerals*, *Lapidary Journal*, and *Monde et Mineraux*, and in 1972 I joined a new magazine, *Rock & Gem*. I was also spending my summers with my family, working on my dad's animal farm, so I had a full plate.

I helped the society when I could. For instance, while on the Tucson Gem & Mineral Society's show committee, I served as a liaison between the club and Don Newsome to help organize the first major fluorescent mineral exhibition at the Tucson Gem and Mineral Show®. Every year since then, a fine fluorescent mineral exhibit has been part of that great show. I think it's time to produce another such exhibition in Tucson.

Fortunately, Tucson's Convention Center, where the Main Show is held each year, is ideally structured for a fluorescent mineral event. Between the main exhibit hall and the exhibit arena, there is what we jokingly refer to as the "bat cave", an all-concrete, windowless room of excellent size, which exhibitors and dealers use to store valuables each night after the show closes.

For the fluorescent mineral exhibit, one corner of the bat cave was partitioned off to preserve a vaultlike facility for dealers. The majority of the space was devoted to many wonderful, privately owned displays of minerals that fluoresce, phosphoresce, or otherwise respond to an assortment of UV

PHOTO COURTESY FMS



**Ruby, like this piece from Macedonia, is normally red, but glows an even more intense red color under a ultraviolet lamp.**

sources. The show was an amazing success, and the bat cave was a busy place every day. I'm sure a great number of visitors and collectors came away from that exhibit with a more positive view of the value of and importance of fluorescent minerals.

Readers really should consider joining the FMS, as I now have. It promotes mineral research that is related to the general hobby of collecting minerals. For instance, we all recognize ruby by its intense red shade, but that color actually has a lot of blue in it. This is because the chromium atoms in the ruby each have three unpaired elec-

PHOTO COURTESY FMS



**These crystals of barite, which are normally white, are responding with a lovely, soft green under ultraviolet light.**

trons that absorb the violet and green light wavelengths that enter the ruby crystal. The unaffected red wavelengths, tinged slightly by the blue wavelengths, are what we see ("Fluorescent Spectroscopy of Minerals", by Robert Fosbury, *FMS Journal*, 2013). You can learn such things by reading the superb, semitechnical articles in the annual FMS journal. As a member, you get it every year! It's publications like this one that make your mineral-collecting hobby far more fascinating and educational. As long as you enjoy the beauty of minerals, why not learn more

about them? The *FMS Journal* helps you do that!

The FMS has many worthy purposes, including:

"to share knowledge and experience gained from the study, identification, collection and display of fluorescent minerals and minerals that exhibit related forms of luminescence such as phosphorescence, tenebrescence, triboluminescence and thermo-luminescence";

"to organize seminars, conduct research, promote displays and exchanges, and to disseminate information about luminescent minerals"; and

"to encourage interest related to fluorescent minerals, such as the development of improved [UV] lighting systems, the photography of fluorescent minerals, the study of luminescent properties related to fluorescence, and exploration of the various applications of fluorescence."

These are certainly noble purposes, and from what I've learned and observed about the society, it has vigorously pursued its stated purposes. I particularly enjoy the very informative *UV Waves* newsletter and journal. The newsletter is sent out bi-monthly and is a high-quality publication.

It contains feature articles, an exchange column, member news and notes, and other topics. The society is now international in scope, with members from Germany, Italy and elsewhere forming the European Fluorescent Mineral Circle. The several hundred members in the United States are divided into five regions, and there is a group devoted to photography and research.

FMS holds annual meetings at the major shows. You can become a member online at [www.uvminerals.org](http://www.uvminerals.org) or by writing to FMS, P.O. Box 572694, Tarzana, CA 91357. Membership gives you six issues of *UV Waves*. You also receive the annual *FMS Journal*.

When warranted, the journal is published a second time in a year. Join and you'll get caught up in the magic of fluorescence, as I was nearly 80 years ago! 💎

Bob Jones holds the Carnegie Mineralogical Award, is a member of the Rockhound Hall of Fame, and has been writing for *Rock & Gem* since its inception. He lectures about minerals, and has written several books and video scripts.







## Scorodite

The 1.5-cm, yellow inclusions are betpakdalite, a rare magnesium iron molybdate. This particular find from the second oxidation zone displays different colors in different lighting.

JOHN SCHNEIDER  
FACEBOOK/TSUMEB MINERAL COLLECTORS

# BelOMO 10x Triplet Loupe

*World's most popular loupe!*

10 times magnification ratio  
3 achromatic optical lenses bonded together  
Larger viewing area than most loupes  
Focal distance: 1.1 inch  
Linear field of view: 0.67 inch  
Size: 1.54 x 1.1 x 0.98 inch  
Weight: 2.1 oz.



Distributed in North America by US Geological Supply

<http://www.belomo.us>

[belomo@usgeologicalsupply.com](mailto:belomo@usgeologicalsupply.com)

877-4BelOMO (877-423-5666)

## Amateur Geologist

*Supplies for the recreational  
geologist and rockhound*



Books - hundreds of titles - most at 30% off  
Estwing rock hammers and tools  
Loupes - BelOMO & Bausch & Lomb  
Geology maps & charts  
Educational rock & mineral collections  
Hardness pick sets  
Vests with pockets galore  
Ultraviolet lights  
Rock tumblers  
Rockhound stuff for kids  
Novelties



Discounted internet prices!!!

**[www.amateurgeologist.com](http://www.amateurgeologist.com)**



# Just add water

Just like the California desert where they are made, our all-diamond Gem-Makers are ready to blossom with just the addition of a little water. Everything you need to grind and polish beautiful gemstones is included.

Contact us for more information or to request a free catalog. e-mail: [diamondpacific@aol.com](mailto:diamondpacific@aol.com)  
Toll free: (800) 253-2954 Outside the US: (760) 255-1030  
download our complete catalog at [www.diamondpacific.com](http://www.diamondpacific.com)



  
**DIAMOND PACIFIC**  
TOOL CORPORATION